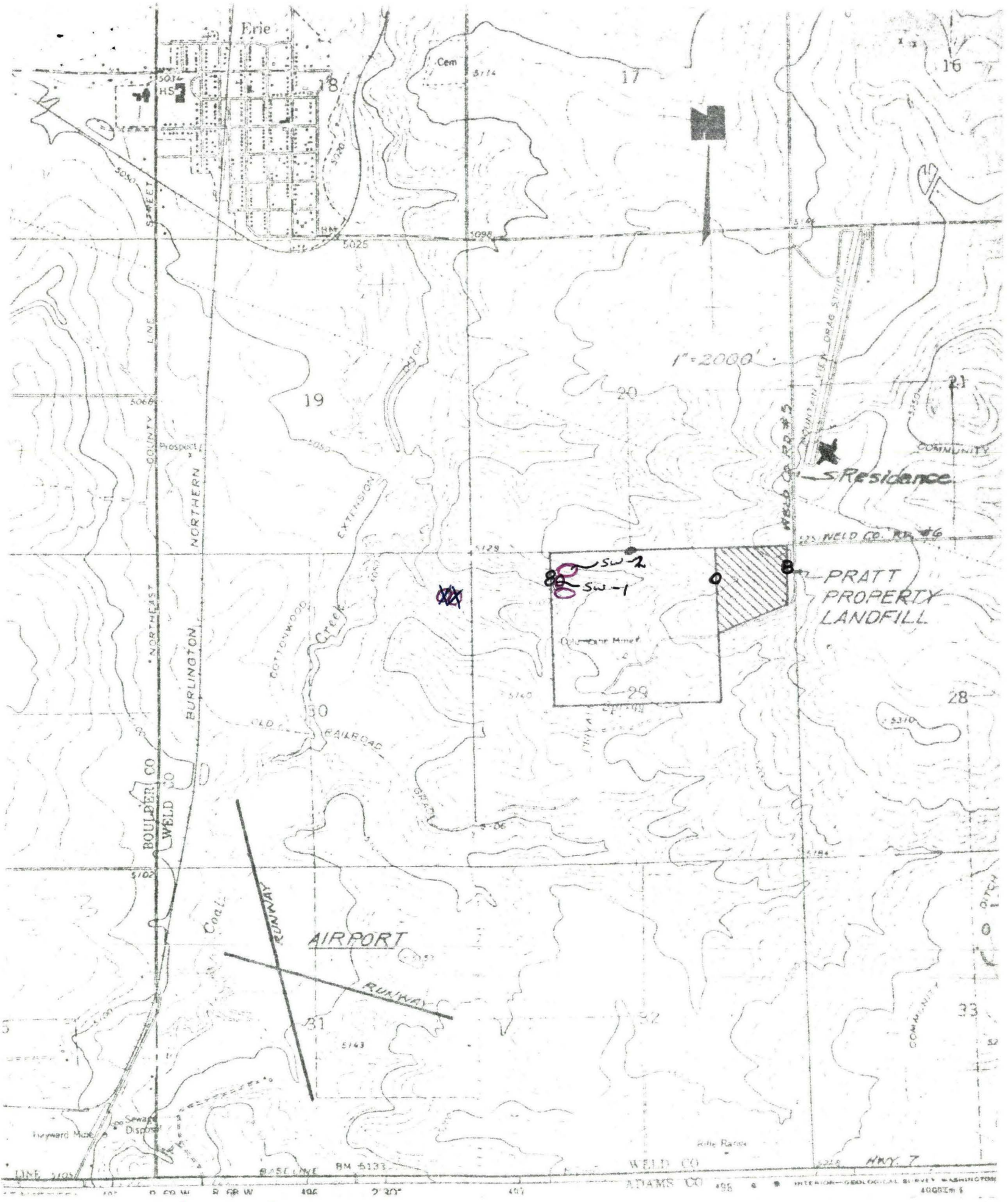


O - approximate Location of ponds (A - Indicate proposed sample locations)

O - approximate Location of wells

VICINITY MAP

PA/WLD/ Columbine Landfill 51 5

Site Inspection

Date: June 12, 1984 Temp: 73°F

Time: Arrived on site 1^10 pm

Inspectors: Scott Winters - CDH

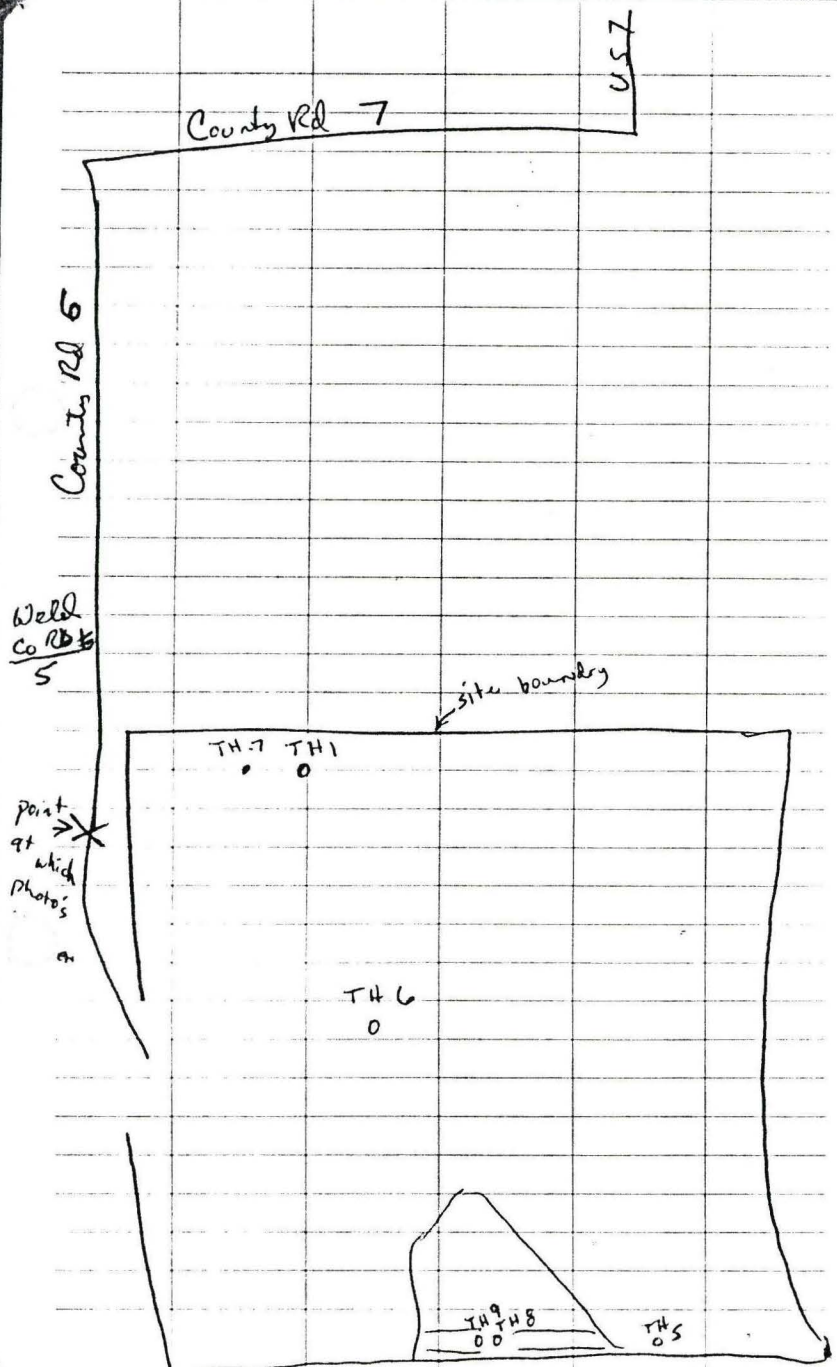
Dennis Holovec - CDH

Today we ~~meet~~ met Mr. Steve Orzynski on site at 1^15 pm. The weather is partly cloudy with the possibility of rain showers.

Mr. Orzynski presented the inspectors with a site plan indicating the property boundries for both the Pratt property and the Colo Landfill Inc. property. The plan also indicates the locations of all test hole locations on both sites.

The test holes are cased with 2" PVC pipe.

Today we are onsite to purge all wells (test holes) containing H_2O.



Test hole TH-1 —
Reported TD is 100 feet
Water level measured at 93 feet
Two casing volumes evacuated.
Total volume per casing volume is .1632 gal/lin foot.
∴ 7 X .1632 = 1.14 gal/casing vol.
Two casing vol = 1.14 x 2 = 2.28 gal
Total vol removed with a 1.5 inch ID ss. bailer is approx 4.5 gal.
15 trips made with bailer

Test hole TH-7 —
Reported TD is 30 feet
Measured depth is 25 feet
No water

Test hole TH-9 —
Time 3:10 pm
Reported TD 80 feet
Measured depth 81 feet. Will not bail water as this almost TD and all mud at bottom of well.

Test hole TH-8 —
Reported TD 30 feet
Measured water level at 22.5 feet
Two casing volumes = 2.38 gal
Seven trips with bailer = 2.1 gal

Test hole TH-5 —
Reported TD 80'
Measured depth 50 feet (No Water)

Test hole TH-6 Temp ≈ 70°F
Reported depth 60' Time is 4:09 pm
Measured water level at 28 feet
Calculated vol per casing is -
5.2224 gal.
Made 32 trips with bailer.
Evacuated a total of 4.8 gals.
Exited site at 5:00 pm. Will
return tomorrow with sample
bottles.

Columbine Landfill
Site Inspection

phone # at site 665-9108

Date: June 13, 1984 Temp: 60°F
Time: Arrived at the site at 8:30 am.
Inspectors: Dennis Hotovec - CDH
Scott Winters - CDH
Mark Mullice E&E
Mr. Mullice is providing tech
assistance to us.
Reported that rain occured on site
the previous night.

Test Hole - 1

Analyses	Sample Tag No.	TRAFFIC Report	Bottle Lot Numbers	C-O-C
BNA	9501	H 1601	89017062	
~~9501~~	9502	" "	"	
~~9502~~	9503	" "	"	
~~9~~	9504	" "	"	
VOA	9505	" "	24023092	
Metals	9506	MH 0976	34020082	

Roll # 1 photos 1-5 view of total site.

We met Steve ~~Oz~~ ~~Org~~ Orzynski at 8 $\frac{50}{}$ am and proceeded to go on site. At 8 $\frac{55}{}$ am we arrived at TH-1

Measured depth of Water is — 92.5 feet

∴ 7.5 feet of H_2O X .16 = 1.2 gal/casing vol Or 2.4 gals

We evacuated ~~10~~ $\frac{10}{12}$ casing volumes.

A composite grab was collected and 4 liters of sample taken for volatals and two ~~out~~ VOA's were collected.

A metals sample was filtered through a 45 micron filter utalizing a nitrogen pressurized barrel filter. Color of filter was coaler/gray

The conductivity of of the sample was 10250 @ 26 °C

The pH of the sample was 4.8 @ 26°C

Test Hole - 8

Analyses	Sample Tag No	Traffic Report		Bottle lot Numbers	C-O-C
BNA	9507	H	1602	84017062	
	9508	"	"	"	
	9509	"	"	"	
	9510	"	"	"	
VOA	9511	H	1602	24023032	
Metals	9512	MH	0977	34020082	

Water level measured @ 24 feet

Time 2:15 pm Weather Code 4 cloudy

A composite grab was collected for volatile organics in 4 liter bottles and two VOA 40 ml bottles

Bailed composite grab sample was very silty. We had to splash bailer down hole to collect enough sample material.

A metals sample was filtered through a 45 micron filter utilizing a nitrogen pressurized hand filter.

The conductivity @ 22°C was 8600

The pH @ 22°C was 6.9

TH-B

Analysis	Sample Tag NO.	Traffic Report	Bottle lot Numbers C-O-C
BNA	9513	H 1603	84017012
	9514	" "	"
	9515	" "	"
	9516	" "	"
VOA	9517	H 1603	24023042
Metals	9518	mH 0978	34020082

These samples were taken to do a field check of our decon and sampling procedures

The samples were collected first in the bailer and then transfered to the stainless steel bucket. The metals sample was run through the barrel filter first and then a portion of this material was used in obtaining the pH + Conductivity readings.

DI water was used first for the Metals sample and then the Organics samples were collected with organics free H_2O from Fisher Scientific Co.

The conductivity @ 22°C was 5.4

The pH @ 22°C was from 6.4 & 7.8

Lot # 732022

SW – 1

Analysis	Sample Tag #	Traffic Report	Bottle lot Numbers	COC
BNA	9519	H 1604	84017072	
	9520	" "	"	
	9521	" "	"	
	9522	" "	"	
VOA	9523	" "	24023042	
Metals	9524	MH 0979	34020082	

Raining SW – 1 (Site personnel call this water pond) 12
(a leachate collection pond)

The surface water number 1 is a burned up area crossing the major drainage which runs through the site.

Very little water was in this pond at the time of sampling.

The samples were collected by use of a long metal rod w/a bottle clamp attached to the end. Each bottle was clamped into place and lowered into the pond for filling. The VOA's were not clamped into place nor was the plastic 1 liter metals bottle. Instead these samples were taken by filling an amber 1 liter bottle and then transferring this vol into the other bottles.

The conductivity @ 23 °C was 2400

The pH @ 23°C was 8.1

Rain started at ≈ 300 pm and continued

SW-2

Analyses	Sample Tag #	Traffic Report	Bottle lot Number C-O-C
BNA	9525	IT 1605	84017072
	9526	" "	"
	9527	" "	"
	9528	" "	"
VOA	9529	IT 1605	24023042
Metals	9530	MH 0980	34020082

Still raining @ 6:09pm SW-2 13

SW-2 is a surface water pond site designated as a surface water runoff control pond.

This pond was sampled on the south side. ~~The~~ Sampling procedures were identical to SW-1.

Steady drizzel (?) Ambient air temp ~ 68° F.

The conductivity of this pond @ 37 °C was 1250 (may have a problem w/ meter) ~~Problem~~

The PH @ 22 °C was 8.9
(22°C)

~~TH-6~~

Analyses

A decision was made to not sample TH-6 until June 16th.

We exited the site at 7:00 pm.

Columbine Landfill

Date: June 14, 1984 Temp 65°F

Time: 9:00 am Warm & muggy

~~Its~~ Inspectors:

Dennis Hotovec CDH

Scott Winters CDH

Mark Mullis E&E Tech Ass.

We arrived onsite and identified our selves with the site personnel. We then proceded onsite to TH-6 for collection of the final set of samples to be collected from this facility.

Measured water level depth was 33.5 feet. Reported total depth of well (By Steve Ozyrski) was ≈ 60'

Analyses	Sample Tag #	TH-6 TRAFFIC Report	Bottle lot Numbers	COC
BNA	9531	H 1606	84017072	
	9532	" "	"	
	9533	" "	"	
	9534	" "	"	
VOA	9535	H 1606	24023042	
Metals	9536	MH 0981	34020082	

Sampled @ 1000

With the water level measured @ 33.5 feet and TD @ 60' the total vol. needed to evacuate 2 casing volumes is —

60 - 33.5 = 26.5' X .16 = 4.24 gal per casing vol.

4.24 X 2 = 8.48 gal

To insure the correct amount of liquid was evacuated we pulled 72 bail fulls out of the hole.

The pH of this sample @ 24°C was 6.7

The conductivity of the sample @ 24°C was 17250.

This set of samples as well as TH-60, which is a duplicate of TH-6, were all bailed and composited in 2 bucket fulls. Split among the 8 amber bottles and the 2 metals and 4 VOA's. The metals were filtered through a bonel filter

TH-60

Analyses	Sample Tag #'s	Traffic Reports	Bottle lot numbers C-O-C
BNA	9537	H 1607	84017072
	9538	" "	"
	9539	" "	"
	9540	" "	"
VOA	9541	H 1607	24023042
Metals	9542	MH0982	34020082

Sampled @ 1000

With a 45 micron filter paper insert. These samples were then tagged and prepared for shippment.

End of the day a sample split was done w/ Colo Landfill.

Exited site @ 1245 pm.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CO	D980635379

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Columbine Landfill	1750 Weld County Rd 6

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Erie	CO	80516	Weld	123	04

09 COORDINATES LATITUDE	LONGITUDE
40 02 04.0	105 01 30.0

10 TYPE OF OWNERSHIP (Check one)
☒ A. PRIVATE ☐ B. FEDERAL _____ ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
06 13 84 (MONTH DAY YEAR)	☒ ACTIVE ☐ INACTIVE	about 1965 (BEGINNING YEAR) Present (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☒ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Scott Winters	Geologist	Colo Dept of Health	(303 320-8333
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Dennis Hatover	"	Colo Dept of Health	(") " "
Mark Mullis	Consultant	E+E	(303)751-4787
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Steve Orzyaski	Tech Services Director	1333 West 120th Suite 210 (Northglenn, CO)	(303 450-2755
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	06/12/84 1315 06/13/84 0830 06/14/84 0900	Basically clear w/ some Rain w/ temps ranging from 70°F to 90°

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Steve Orzyaski	Kiewit Corporation	(303) 450-2755

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Scott Winters	CDH	WMD	303-320-8333	10 24 84 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CO	D980635379

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER (Specify) _____
- ☐ E. SLURRY
- ☒ F. LIQUID (?)
- ☐ G. GAS

02 WASTE QUANTITY AT SITE

(Measures of waste quantities must be independent)

TONS _____

CUBIC YARDS _____

NO. OF DRUMS ± 1500 —

84,000 gallons

03 WASTE CHARACTERISTICS (Check all that apply)

- ☒ A. TOXIC
- ☒ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☒ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS *	Unknown	Unknown	Total VOL is about
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS *	"	Unknown	84,000 gallons
IOC	INORGANIC CHEMICALS *	"	"	
ACD	ACIDS *	"	"	
BAS	BASES *	"	"	
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
SOL	MEK, MIBK, Cyclohexane ?		Drums	unknown	—
OCC	Unknown	Unknown	unknown	"	
IOC	"	"	"	"	
ACD	"	"	"	"	
BAS	"	"	"	"	

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA & State files

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CO | 02 SITE NUMBER: D980635379

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: unknown
04 NARRATIVE DESCRIPTION
From groundwater samples, before EPA QA/QC review, may indicate contaminants in the system.

01 ☒ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 2300
04 NARRATIVE DESCRIPTION
Because the shallow alluvial groundwater eventually daylights probably flows toward Coal Creek, about ½ mile from site. These conditions provide the potential for surface water contam

01 ☐ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
None reported or observed

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
" " " "

01 ☐ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
None reported

01 ☒ F. CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: total 1 acre use 195 (Acres)
04 NARRATIVE DESCRIPTION
Possible if drums are leaking

01 ☒ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
Same statements as given in groundwater and surface water.

01 ☐ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
None reported

01 ☐ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
" "

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CO | 02 SITE NUMBER: D980685379

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Not observed

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)
" " " "

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
" " " "

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES (Spills, Runoff, Standing liquids, Leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
" "

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
None reported

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
" "

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
" "

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
None reported or observed

III. TOTAL POPULATION POTENTIALLY AFFECTED: Total could be about 2300

IV. COMMENTS
None

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)
EPA + State files
Site inspection + conversation w/ facility contact

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CO	D980635379

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)	Certificate of Designation		none	
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☒ F. LANDFILL w/drums below ground	± 1500	drums
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCINERATION N/A
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER

☒ A. BUILDINGS ON SITE

3 - 4

06 AREA OF SITE

195 (Acres)

07 COMMENTS

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE Potentially ☒ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

the drums were disposed of on a 10 ~~acre~~ to 25 acre site in the late 60's and early 70's

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☒ NO

02 COMMENTS

Drums have been buried for at ~~least~~ least 10 yrs. Several 10's of feet of solid waste

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

EPA & State Files
Site Contacts

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CO	D980635379

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)	SURFACE	WELL	02 STATUS: ENDANGERED	AFFECTED	MONITORED	03 DISTANCE TO SITE
COMMUNITY	A. ☐	B. ☐	A. ☐	B. ☐	C. ☐	A. _____ (mi)
NON-COMMUNITY	C. ☐	D. ☐	D. ☐	E. ☐	F. ☐	B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☐ A. ONLY SOURCE FOR DRINKING ☒ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER	03 DISTANCE TO NEAREST DRINKING WATER WELL
within 1 to 2 miles 100 to 200	≈ 1½ (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
about 40-50 (ft)	probably west	40 to 50 or 400 (ft)	Unknown (gpd)	☐ YES ☒ NO

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings)

The majority of the wells within this area are used for principally irrigation ~~and~~ and some domestic uses.

10 RECHARGE AREA		11 DISCHARGE AREA	
☐ YES ☐ NO	COMMENTS: Unknown	☐ YES ☐ NO	COMMENTS: Unknown

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☒ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Coal Creek	☐	½ (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE	02 DISTANCE TO NEAREST POPULATION
A. 30 to 50 NO. OF PERSONS	B. 100 to 200 NO. OF PERSONS	C. 2300 NO. OF PERSONS	½ (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE	04 DISTANCE TO NEAREST OFF-SITE BUILDING
50 to 60	½ (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

In the immediate vicinity is a rural ~~from~~ farm & ranch area with the town of Erie about 2 to 3 miles to the northwest.

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: CO | 02 SITE NUMBER: COD980635379

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
exact depth unknown approx 10-15 feet (ft)	Unknown (ft)	Unknown	
06 NET PRECIPITATION	**07 ONE YEAR 24 HOUR RAINFALL**	**08 SLOPE**	
8 to 12 (in)	Unknown (in)	SITE SLOPE: 2-5 %	DIRECTION OF SITE SLOPE: West / TERRAIN AVERAGE SLOPE: about 5 %

09 FLOOD POTENTIAL: not in ~~SITE IS IN~~ 100 YEAR FLOODPLAIN

10 N/A ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A. N/A (mi) OTHER: B. ½ (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species): Unknown (mi)

ENDANGERED SPECIES: unknown

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AG LAND
A. ½-¾ (mi)	B. about 2-3 (mi)	C. adjacent to property (mi)	D. (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The facility is located ~~about~~ above an old ~~coal~~ coal mine with several faults existing in this area. The overall topography is an upland area characterized by gently ~~steep~~ sloped with a maximum slope of about 10%. Relief in this area is approx 80 feet from the top of the landfill down to Coal Creek. 3 surface water containment ponds are situated on site with 2 additional stock ponds downslope / down drainage, of the site about ½ mile.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

State Files
On site inspection
Conversation with facility contact

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CO	D980635379

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	~~4~~ 5	All inorganic samples were submitted to Cambridge Analytical Assoc. located at 222 Arsenal St. in Watertown, Mass. Organic samples were sent to Spectrix Corp. located at 3911 Fondren, Suite 100 in Houston Texas	Organics Analyses received Sept 17, 1987 Inorganics not received at time of report
SURFACE WATER	2		
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
pH	~~the~~ values ranged from 6.7 to 8.9
Conductivity	" " " 2400 to 17250

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL

02 IN CUSTODY OF Colo Dept of Health (Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS Colorado Dept of Health

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

No other data collected

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Onsite inspection
EPA + State Files
Laboratory Data

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CO	D980635379

II. CURRENT OWNER(S) old property & then New | **PARENT COMPANY** (if applicable)

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
Kenneth Pratt		Same	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**10 STREET ADDRESS** (P.O. Box, RFD #, etc.)	**11 SIC CODE**
1921 Panorama Circle			
05 CITY / **06 STATE** / **07 ZIP CODE**		**12 CITY** / **13 STATE** / **14 ZIP CODE**	
Longmont / CO / 80501			
01 NAME	**02 D+B NUMBER**	**08 NAME**	**09 D+B NUMBER**
Kernes Corporation		Same	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**10 STREET ADDRESS** (P.O. Box, RFD #, etc.)	**11 SIC CODE**
1333 West 120th Suite 210			
05 CITY / **06 STATE** / **07 ZIP CODE**		**12 CITY** / **13 STATE** / **14 ZIP CODE**	
Northglenn / CO / 80234			
01 NAME	**02 D+B NUMBER**	**08 NAME**	**09 D+B NUMBER**
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**10 STREET ADDRESS** (P.O. Box, RFD #, etc.)	**11 SIC CODE**
05 CITY / **06 STATE** / **07 ZIP CODE**		**12 CITY** / **13 STATE** / **14 ZIP CODE**	
01 NAME	**02 D+B NUMBER**	**08 NAME**	**09 D+B NUMBER**
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**10 STREET ADDRESS** (P.O. Box, RFD #, etc.)	**11 SIC CODE**
05 CITY / **06 STATE** / **07 ZIP CODE**		**12 CITY** / **13 STATE** / **14 ZIP CODE**	

III. PREVIOUS OWNER(S) | **IV. REALTY OWNER(S)** (if applicable; list most recent first)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**03 STREET ADDRESS** (P.O. Box, RFD #, etc.)	**04 SIC CODE**
05 CITY / **06 STATE** / **07 ZIP CODE**		**05 CITY** / **06 STATE** / **07 ZIP CODE**	
01 NAME	**02 D+B NUMBER**	**01 NAME**	**02 D+B NUMBER**
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**03 STREET ADDRESS** (P.O. Box, RFD #, etc.)	**04 SIC CODE**
05 CITY / **06 STATE** / **07 ZIP CODE**		**05 CITY** / **06 STATE** / **07 ZIP CODE**	
01 NAME	**02 D+B NUMBER**	**01 NAME**	**02 D+B NUMBER**
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**03 STREET ADDRESS** (P.O. Box, RFD #, etc.)	**04 SIC CODE**
05 CITY / **06 STATE** / **07 ZIP CODE**		**05 CITY** / **06 STATE** / **07 ZIP CODE**	

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

State Files
Facility Contacts

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CO	D980635379

II. CURRENT OPERATOR *(Provide if different from owner)* Same as Part 7 #2

01 NAME	02 D+B NUMBER

03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER

OPERATOR'S PARENT COMPANY *(If applicable)*

10 NAME	11 D+B NUMBER

12 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) *(List most recent first; provide only if different from owner)*

PREVIOUS OPERATORS' PARENT COMPANIES *(If applicable)*

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER

03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	04 SIC CODE	12 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	13 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER

03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	04 SIC CODE	12 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	13 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER

03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	04 SIC CODE	12 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	13 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

IV. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CO	D980635379

II. ON-SITE GENERATOR Not applicable.

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION
01 STATE: CO | 02 SITE NUMBER: D980635379

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not reported

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CO	0980635379

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not reported

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CO	D980635379

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

III. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

EPA FORM 2070-13 (7-81)

RE: COLUMBINE LANDFILL WELL 6

CTRIX DC # 2903-8-8 MPLE NUMBER: H1601

2903-8-8 GW-1

ORGANICS ANALYSIS DATA SHEET - PAGE 1

LABORATORY NAME: SPECTRIX
AB SAMPLE ID NO.: 840602206
AMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: MKF

CASE NO.: ~~SVHS~~ DDT 2903
QC REPORT NO.: 70
CONTRACT NO.: 68-01-6728
DATE SAMPLE RECEIVED: 6-15-84

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 6-16-84
DATE ANALYZED: 07/12/84
PERCENT MOISTURE:

DATAFILE: EU06022C06
(CONC) OR DILUTION FACTOR: 500

PP#	CAS #	COMPOUND	UG/L
(61B)	62-75-9	N-NITROSODIMETHYLAMINE	20 U
(21A)	88-06-2	2,4,6-TRICHLOROPHENOL	20 U
(22A)	59-50-7	P-CHLORO-M-CRESOL	20 U
(24A)	95-57-8	2-CHLOROPHENOL	20 U
(31A)	120-83-2	2,4-DICHLOROPHENOL	20 U
(34A)	105-67-9	2,4-DIMETHYLPHENOL	20 U
(57A)	88-75-5	2-NITROPHENOL	40 U
(58A)	100-02-7	4-NITROPHENOL	100 U
(59A)	51-28-5	2,4-DINITROPHENOL	100 U
(60A)	534-52-1	4,6-DINITRO-2-METHYLPHENOL	40 U
(64A)	87-86-5	PENTACHLOROPHENOL	20 U
(65A)	108-95-2	PHENOL	20 U
( )	65-85-0	BENZOIC ACID	200 U
( )	95-48-7	2-METHYLPHENOL	10 U
( )	108-39-4	4-METHYLPHENOL	10 U
( )	95-95-4	2,4,5-TRICHLOROPHENOL	200 U
(1B)	83-32-9	ACENAPHTHENE	20 U
(5B)	92-87-5	BENZIDINE	80 U
(8B)	120-82-1	1,2,4-TRICHLOROBENZENE	20 U
(9B)	118-74-1	HEXACHLOROBENZENE	20 U
(12B)	67-72-1	HEXACHLOROETHANE	20 U
(18B)	111-44-4	BIS(2-CHLOROETHYL)ETHER	20 U
(20B)	91-58-7	2-CHLORONAPHTHALENE	20 U
(25B)	95-50-1	1,2-DICHLOROBENZENE	20 U
(26B)	541-73-1	1,3-DICHLOROBENZENE	20 U
(27B)	106-46-7	1,4-DICHLOROBENZENE	20 U
(28B)	91-94-1	3,3'-DICHLOROBENZIDINE	40 U
(35B)	121-14-2	2,4-DINITROTOLUENE	40 U
(36B)	606-20-2	2,6-DINITROTOLUENE	40 U
(37B)	122-66-7	1,2-DIPHENYLHYDRAZINE	40 U
(39B)	206-44-0	FLUORANTHENE	20 U
(40B)	7005-72-3	4-CHLOROPHENYL PHENYL ETHER	20 U
(41B)	101-55-3	4-BROMOPHENYL PHENYL ETHER	20 U
(42B)	39638-32-9	BIS(2-CHLOROISOPROPYL) ETHER	40 U
(43B)	111-91-1	BIS(2-CHLOROETHOXY) METHANE	40 U
(52B)	87-68-3	HEXACHLOROBUTADIENE	20 U
(53B)	77-47-4	HEXACHLOROCYCLOPENTADIENE	20 U
(54B)	78-59-1	ISOPHORONE	20 U

SAMPLE NUMBER: H1601

EMIVOLATILE ORGANIC ANALYSIS DATA SHEET CONTINUED

DATAFILE EU06022C06

PP#	CAS #	COMPOUND	UG/L
(55B)	91-20-3	NAPHTHALENE	20 U
(56B)	98-95-3	NITROBENZENE	20 U
(62B)	86-30-6	N-NITROSODIPHENYLAMINE	20 U
(63B)	621-64-7	N-NITROSODIPROPYLAMINE	20 U
(66B)	117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	20 K
(67B)	85-68-7	BENZYL BUTYL PHTHALATE	20 U
(68B)	84-74-2	DI-N-BUTYL PHTHALATE	20 K
(69B)	117-84-0	DI-N-OCTYL PHTHALATE	20 U
(70B)	84-66-2	DIETHYL PHTHALATE	20 U
(71B)	131-11-3	DIMETHYL PHTHALATE	20 U
(72B)	56-55-3	BENZO(A)ANTHRACENE	20 U
(73B)	50-32-8	BENZO(A)PYRENE	40 U
(74B)	205-99-2	BENZO(B)FLUORANTHENE	40 U
(75B)	207-08-9	BENZO(K)FLUORANTHENE	40 U
(76B)	218-01-9	CHRYSENE	40 U
(77B)	208-96-8	ACENAPHTHYLENE	20 U
(78B)	120-12-7	ANTHRACENE	20 U
79B)	191-24-2	BENZO(GHI)PERYLENE	40 U
(80B)	86-73-7	FLUORENE	20 U
(81B)	85-01-8	PHENANTHRENE	20 U
(82B)	53-70-3	DIBENZO(A,H)ANTHRACENE	40 U
(83B)	193-39-5	INDENO(1,2,3-CD)PYRENE	40 U
(84B)	129-00-0	PYRENE	20 U
( )	62-53-3	ANILINE	20 U
( )	100-51-6	BENZYL ALCOHOL	40 U
( )	106-47-8	4-CHLOROANILINE	100 U
( )	132-64-9	DIBENZOFURAN	20 U
( )	91-57-6	2-METHYLNAPHTHALENE	40 U
( )	88-74-4	2-NITROANILINE	200 U
( )	99-09-2	3-NITROANILINE	200 U
( )	100-01-6	4-NITROANILINE	200 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
K = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
B = AMOUNT IN BLANK IS GREATER THAN 1/2 THE AMOUNT DETECTED
C = AMOUNT HAS BEEN CORRECTED FOR THE AMOUNT IN THE BLANK

SAMPLE NUMBER: H1601

ORGANICS ANALYSIS DATA SHEET (PAGE 2)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 840602206
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: MKF

CASE NO.: 2903
QC REPORT NO.: 70
CONTRACT NO.: 68-01-6728
DATE SAMPLE RECEIVED: 6/15/84

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 06/21/84
DATE ANALYZED: 06/21/84
PERCENT MOISTURE:

PP#	CAS #	COMPOUND	UG/L
(2V)	107-02-8	ACROLEIN	100 U
(3V)	107-13-1	ACRYLONITRILE	100 U
(4V)	71-43-2	BENZENE	5 U
(6V)	56-23-5	CARBON TETRACHLORIDE	5 U
(7V)	108-90-7	CHLOROBENZENE	5 U
(10V)	107-06-2	1,2-DICHLOROETHANE	1 U
(11V)	71-55-6	1,1,1-TRICHLOROETHANE	5 U
(13V)	75-34-3	1,1-DICHLOROETHANE	5 U
(14V)	79-00-5	1,1,2-TRICHLOROETHANE	5 U
(15V)	79-34-5	1,1,2,2-TETRACHLOROETHANE	10 U
16V)	75-00-3	CHLOROETHANE	10 U
(19V)	110-75-8	2-CHLOROETHYLVINYL ETHER	10 U
(23V)	67-66-3	CHLOROFORM	5 U
(29V)	75-35-4	1,1-DICHLOROETHENE	5 U
(30V)	156-60-5	TRANS-1,2-DICHLOROETHENE	5 U
(32V)	78-87-5	1,2-DICHLOROPROPANE	10 U
(33V)	10061-02-6	TRANS-1,3-DICHLOROPROPENE	5 U
( )	10061-01-5	CIS-1,3-DICHLOROPROPENE	5 U
(38V)	100-41-4	ETHYLBENZENE	5 U
(44V)	75-09-2	METHYLENE CHLORIDE	5 KB
(45V)	74-87-3	CHLOROMETHANE	10 U
(46V)	74-83-9	BROMOMETHANE	10 U
(47V)	75-25-2	BROMOFORM	10 U
(48V)	75-27-4	BROMODICHLOROMETHANE	5 U
(49V)	75-69-4	FLUOROTRICHLOROMETHANE	5 U
(50V)	75-71-8	DICHLORODIFLUOROMETHANE	5 U
(51V)	124-48-1	CHLORODIBROMOMETHANE	5 U
(85V)	127-18-4	TETRACHLOROETHENE	5 U
(86V)	108-88-3	TOLUENE	5 U
(87V)	79-01-6	TRICHLOROETHENE	5 U
(88V)	75-01-4	VINYL CHLORIDE	10 U
( )	67-64-1	ACETONE	210
( )	78-93-3	2-BUTANONE	5 U
( )	75-15-0	CARBONDISULFIDE	1 U
( )	519-78-6	2-HEXANONE	5 U
( )	108-10-1	4-METHYL-2-PENTANONE	5 U
( )	100-42-5	STYRENE	5 U
( )	108-05-4	VINYL ACETATE	5 U
( )	1330-20-7	TOTAL XYLENES	5 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
K = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
B = AMOUNT IN BLANK IS GREATER THAN 1/2 THE AMOUNT DETECTED

000009

SPECTRIX DC # 2903-8

Sample Number: H1601
LOW LEVEL WATER

ORGANICS ANALYSIS DATA SHEET - Page 3

FORM II

Laboratory Name: SPECTRIX CORPORATION
Lab Sample I.D. No: 8406022
Date Received: 6/15/84
Date Extracted: 6/20/84

Doc. Control No: 2903-8 -88
Case No: 2903
QC Report No: 70
Date Analyzed: 6/26/84
Factor: Conc. 100 Dil.

PESTICIDES

MULTIPLY ALL VALUES AND DETECTION LIMITS BY .01

PP #	CAS #		ug/l
(89P)	309-00-2	aldrin	10 U
(90P)	60-57-1	dieldrin **	10 U → 10K
(91P)	57-74-9	chlordane	10 U
(92P)	50-29-3	4,4'-DDT	10 U
(93P)	72-55-9	4,4'-DDE	10 U
(94P)	72-54-8	4,4'-DDD	10 U
(95P)	115-29-7	endosulfan I	10 U
(96P)	115-29-7	endosulfan II	10 U
(97P)	1031-07-8	endosulfan sulfate	10 U
(98P)	72-20-8	endrin	10 U
(99P)	7421-43-4	endrin aldehyde	10 U
(100P)	76-44-8	heptachlor **	10 → K
(101P)	1024-57-3	heptachlor epoxide	10 U

PP #	CAS #		ug/l
(102P)	319-84-6	BHC-Alpha	10 U
(103P)	319-85-7	BHC-Beta	10 U
(104P)	319-86-8	BHC-Delta	10 U
(105P)	58-89-9	BHC-Gamma **	14.1 → 10 U
(106P)	53469-21-9	PCB-1242	200 U
(107P)	11097-69-7	PCB-1254	200 U
(108P)	11104-28-2	PCB-1221	200 U
(109P)	11141-16-5	PCB-1232	200 U
(110P)	12672-29-6	PCB-1248	200 U
(111P)	11096-82-5	PCB-1260	200 U
(112P)	12674-11-2	PCB-1016	200 U
(113P)	8001-35-2	toxaphene	200 U

FACTOR: $\frac{5}{500}$ [V_F(mL)]x $\frac{1}{}$ [D.F.] = .01
[V_I(mL)]

V_F = Final volume of extract D.F. = Dilution factor

V_I = Initial weight of sample extracted

MHCFinch

DIOXINS N/A

MULTIPLY ALL VALUES AND DETECTION LIMITS BY _____

Date Analyzed: _____
Factor: Conc._____ Dil.___

PP #	CAS #		ug/l
(129P)	1747-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	5 U

FACTOR: $\frac{}{}$ [V_F(mL)]x $\frac{}{}$ [D.F.] =
[V_I(mL)]

V_F = Final volume of extract D.F. = Dilution factor

V_I = Initial weight of sample extracted

DATA REPORTING QUALIFIERS

Value - If the result is a value greater than or equal to the detection limit, report the value.

U - Indicates compound was analyzed for but not detected. The number is the minimum detection limit.

K - Actual value, within the limitations of this method, is less than the value given. The mass spectral data indicates the presence of a compound that meets the identification criteria but the quantitative result is less than the specified detection limit but greater than zero.

** - This flag applies to pesticides parameters where the identification has been performed using two column confirmation (as specified in Method 608) but the level is too low for verification of the compound by mass spectrometry.

B - Compound not detected: blank value for the compound was greater than 1/2 of the MDL and greater than 1/2 of the concentration detected in sample.

SAMPLE NUMBER: H1601

GW1

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION CASE NO. : 2903

QC REPORT NO. : 70 ANALYST: DDT DATAFILE: EU06022V06

B. TENTATIVELY IDENTIFIED COMPOUNDS

MKF

CAS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT UG/L
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	33		86
115-10-6	METHANE, OXYBIS-	50	98.5%	310
20600-96-8	1, 2-PROPANEDIOL, 3, 3'-OXYDI-, TETRANITRATE	145	853	90
106-98-9	1-BUTENE	148	768	130
9-87-5	METHANE, DIMETHOXY-	201	971	33

ONLY 2 INTERNAL STANDARDS FOUND

GW-2

ORGANICS ANALYSIS DATA SHEET - PAGE 1

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 840602207
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: MKF
CASE NO.: ~~SVHE~~ DDT 2903
QC REPORT NO.: 70
CONTRACT NO.: 68-01-6728
DATE SAMPLE RECEIVED: 6-15-84

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 6-16-84
DATE ANALYZED: 07/12/84
PERCENT MOISTURE:
DATAFILE: EU06022C07
(CONC) OR DILUTION FACTOR: 500

PP#	CAS #	COMPOUND	UG/L
(61B)	62-75-9	N-NITROSODIMETHYLAMINE	20 U
(21A)	88-06-2	2,4,6-TRICHLOROPHENOL	20 U
(22A)	59-50-7	P-CHLORO-M-CRESOL	20 U
(24A)	95-57-8	2-CHLOROPHENOL	20 U
(31A)	120-83-2	2,4-DICHLOROPHENOL	20 U
(34A)	105-67-9	2,4-DIMETHYLPHENOL	20 U
(57A)	88-75-5	2-NITROPHENOL	40 U
(58A)	100-02-7	4-NITROPHENOL	100 U
(59A)	51-28-5	2,4-DINITROPHENOL	100 U
(60A)	534-52-1	4,6-DINITRO-2-METHYLPHENOL	40 U
(64A)	87-86-5	PENTACHLOROPHENOL	20 U
(65A)	108-95-2	PHENOL	20 U
( )	65-85-0	BENZOIC ACID	200 U
( )	95-48-7	2-METHYLPHENOL	10 U
( )	108-39-4	4-METHYLPHENOL	10 U
( )	95-95-4	2,4,5-TRICHLOROPHENOL	200 U
(1B)	83-32-9	ACENAPHTHENE	20 U
(5B)	92-87-5	BENZIDINE	80 U
(8B)	120-82-1	1,2,4-TRICHLOROBENZENE	20 U
(9B)	118-74-1	HEXACHLOROBENZENE	20 U
(12B)	67-72-1	HEXACHLOROETHANE	20 U
(18B)	111-44-4	BIS(2-CHLOROETHYL)ETHER	20 U
(20B)	91-58-7	2-CHLORONAPHTHALENE	20 U
(25B)	95-50-1	1,2-DICHLOROBENZENE	20 U
(26B)	541-73-1	1,3-DICHLOROBENZENE	20 U
(27B)	106-46-7	1,4-DICHLOROBENZENE	20 U
(28B)	91-94-1	3,3'-DICHLOROBENZIDINE	40 U
(35B)	121-14-2	2,4-DINITROTOLUENE	40 U
(36B)	606-20-2	2,6-DINITROTOLUENE	40 U
(37B)	122-66-7	1,2-DIPHENYLHYDRAZINE	40 U
(39B)	206-44-0	FLUORANTHENE	20 U
(40B)	7005-72-3	4-CHLOROPHENYL PHENYL ETHER	20 U
(41B)	101-55-3	4-BROMOPHENYL PHENYL ETHER	20 U
(42B)	39638-32-9	BIS(2-CHLOROISOPROPYL) ETHER	40 U
(43B)	111-91-1	BIS(2-CHLOROETHOXY) METHANE	40 U
(52B)	87-68-3	HEXACHLOROBUTADIENE	20 U
(53B)	77-47-4	HEXACHLOROCYCLOPENTADIENE	20 U
(54B)	78-59-1	ISOPHORONE	20 U

SAMPLE NUMBER: H1602

SEMIVOLATILE ORGANIC ANALYSIS DATA SHEET CONTINUED

DATAFILE EU06022C07

PP#	CAS #	COMPOUND	UG/L
(55B)	91-20-3	NAPHTHALENE	20 U
(56B)	98-95-3	NITROBENZENE	20 U
(62B)	86-30-6	N-NITROSODIPHENYLAMINE	20 U
(63B)	621-64-7	N-NITROSODIPROPYLAMINE	20 U
(66B)	117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	20 U
(67B)	85-68-7	BENZYL BUTYL PHTHALATE	20 U
(68B)	84-74-2	DI-N-BUTYL PHTHALATE	20 U
(69B)	117-84-0	DI-N-OCTYL PHTHALATE	20 U
(70B)	84-66-2	DIETHYL PHTHALATE	20 U
(71B)	131-11-3	DIMETHYL PHTHALATE	20 U
(72B)	56-55-3	BENZO(A)ANTHRACENE	20 U
(73B)	50-32-8	BENZO(A)PYRENE	40 U
(74B)	205-99-2	BENZO(B)FLUORANTHENE	40 U
(75B)	207-08-9	BENZO(K)FLUORANTHENE	40 U
(76B)	218-01-9	CHRYSENE	40 U
(77B)	208-96-8	ACENAPHTHYLENE	20 U
(78B)	120-12-7	ANTHRACENE	20 U
(79B)	191-24-2	BENZO(GHI)PERYLENE	40 U
(80B)	86-73-7	FLUORENE	20 U
(81B)	85-01-8	PHENANTHRENE	20 U
(82B)	53-70-3	DIBENZO(A,H)ANTHRACENE	40 U
(83B)	193-39-5	INDENO(1,2,3-CD)PYRENE	40 U
(84B)	129-00-0	PYRENE	20 U
( )	62-53-3	ANILINE	20 U
( )	100-51-6	BENZYL ALCOHOL	40 U
( )	106-47-8	4-CHLOROANILINE	100 U
( )	132-64-9	DIBENZOFURAN	20 U
( )	91-57-6	2-METHYLNAPHTHALENE	40 U
( )	88-74-4	2-NITROANILINE	200 U
( )	99-09-2	3-NITROANILINE	200 U
( )	100-01-6	4-NITROANILINE	200 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
K = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
B = AMOUNT IN BLANK IS GREATER THAN 1/2 THE AMOUNT DETECTED
C = AMOUNT HAS BEEN CORRECTED FOR THE AMOUNT IN THE BLANK

SAMPLE NUMBER: H1602

ORGANICS ANALYSIS DATA SHEET (PAGE 2)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 840602207
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: MKF

CASE NO.: 2903
QC REPORT NO.: 70
CONTRACT NO.: 68-01-6728
DATE SAMPLE RECEIVED: 6/15/84

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 06/21/84
DATE ANALYZED: 06/21/84
PERCENT MOISTURE:

PP#	CAS #	COMPOUND	UG/L
(2V)	107-02-8	ACROLEIN	100 U
(3V)	107-13-1	ACRYLONITRILE	100 U
(4V)	71-43-2	BENZENE	5 U
(6V)	56-23-5	CARBON TETRACHLORIDE	5 U
(7V)	108-90-7	CHLOROBENZENE	5 U
(10V)	107-06-2	1,2-DICHLOROETHANE	1 U
(11V)	71-55-6	1,1,1-TRICHLOROETHANE	5 U
(13V)	75-34-3	1,1-DICHLOROETHANE	5 U
(14V)	79-00-5	1,1,2-TRICHLOROETHANE	5 U
(15V)	79-34-5	1,1,2,2-TETRACHLOROETHANE	10 U
(16V)	75-00-3	CHLOROETHANE	10 U
(19V)	110-75-8	2-CHLOROETHYLVINYL ETHER	10 U
(23V)	67-66-3	CHLOROFORM	5 U
(29V)	75-35-4	1,1-DICHLOROETHENE	5 U
(30V)	156-60-5	TRANS-1,2-DICHLOROETHENE	5 U
(32V)	78-87-5	1,2-DICHLOROPROPANE	10 U
(33V)	10061-02-6	TRANS-1,3-DICHLOROPROPENE	5 U
( )	10061-01-5	CIS-1,3-DICHLOROPROPENE	5 U
(38V)	100-41-4	ETHYLBENZENE	5 U
(44V)	75-09-2	METHYLENE CHLORIDE	5 KB
(45V)	74-87-3	CHLOROMETHANE	10 K
(46V)	74-83-9	BROMOMETHANE	10 U
(47V)	75-25-2	BROMOFORM	10 U
(48V)	75-27-4	BROMODICHLOROMETHANE	5 U
(49V)	75-69-4	FLUOROTRICHLOROMETHANE	5 U
(50V)	75-71-8	DICHLORODIFLUOROMETHANE	5 U
(51V)	124-48-1	CHLORODIBROMOMETHANE	5 U
(85V)	127-18-4	TETRACHLOROETHENE	5 U
(86V)	108-88-3	TOLUENE	5 U
(87V)	79-01-6	TRICHLOROETHENE	5 U
(88V)	75-01-4	VINYL CHLORIDE	10 U
( )	67-64-1	ACETONE	5 U
( )	78-93-3	2-BUTANONE	5 U
( )	75-15-0	CARBONDISULFIDE	1 U
( )	519-78-6	2-HEXANONE	5 U
( )	108-10-1	4-METHYL-2-PENTANONE	5 U
( )	100-42-5	STYRENE	5 U
( )	108-05-4	VINYL ACETATE	5 U
( )	1330-20-7	TOTAL XYLENES	5 U

000031

U = UNDETECTED AT THE LISTED DETECTION LIMIT
K = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
B = AMOUNT IN BLANK IS GREATER THAN 1/2 THE AMOUNT DETECTED

SPECTRIX DC # 2903-8

H1602
LOW LEVEL LAYER

ORGANICS ANALYSIS DATA SHEET - Page 3

FORM II

Laboratory Name: SPECTRIX CORPORATION
Lab Sample I.D. No: 8406022
Date Received: 6/15/84
Date Extracted: 6/20/84

Doc. Control No: 2903-8 -03
Case No: 2903
QC Report No: 70
Date Analyzed: 6/26/84
Factor: Conc. 100 Dil.

PESTICIDES

MULTIPLY ALL VALUES AND DETECTION LIMITS BY .01

PP #	CAS #		ug/l	PP #	CAS #		ug/l
(89P)	309-00-2	aldrin	10 U	(102P)	319-84-6	BHC-Alpha	10 U
(90P)	60-57-1	dieldrin	10 U	(103P)	319-85-7	BHC-Beta	10 U
(91P)	57-74-9	chlordane	10 U	(104P)	319-86-8	BHC-Delta	10 U
(92P)	50-29-3	4,4'-DDT	10 U	(105P)	58-89-9	BHC-Gamma	10 U
(93P)	72-55-9	4,4'-DDE	10 U	(106P)	53469-21-9	PCB-1242	200 U
(94P)	72-54-8	4,4'-DDD	10 U	(107P)	11097-69-7	PCB-1254	200 U
(95P)	115-29-7	endosulfan I	10 U	(108P)	11104-28-2	PCB-1221	200 U
(96P)	115-29-7	endosulfan II	10 U	(109P)	11141-16-5	PCB-1232	200 U
(97P)	1031-07-8	endosulfan sulfate	10 U	(110P)	12672-29-6	PCB-1248	200 U
(98P)	78-20-8	endrin	10 U	(111P)	11096-82-5	PCB-1260	200 U
(99P)	7421-43-4	endrin aldehyde	10 U	(112P)	12674-11-2	PCB-1016	200 U
(100P)	76-44-8	heptachlor	10 U	(113P)	8001-35-2	toxaphene	200 U
(101P)	1024-57-3	heptachlor epoxide	10 U				

FACTOR: $\frac{5}{500}$ [V_F(mL)]x $\frac{1}{[V_I(mL)]}$ [D.F.] = .01

MK Fencl

V_F = Final volume of extract D.F. = Dilution factor

V_I = Initial weight of sample extracted

DIOXINS N/A

MULTIPLY ALL VALUES AND DETECTION LIMITS BY _____

Date Analyzed: _____
Factor: Conc._____ Dil.___

PP #	CAS #		ug/l
(129P)	1747-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	5 U

FACTOR: [V_F(mL)]x [D.F.] =
[V_I(mL)]

V_F = Final volume of extract D.F. = Dilution factor

V_I = Initial weight of sample extracted

DATA REPORTING QUALIFIERS

Value - If the result is a value greater than or equal to the detection limit, report the value.

U - Indicates compound was analyzed for but not detected. The number is the minimum detection limit.

E - Actual value, within the limitations of this method, is less than the value given. The mass spectral data indicates the presence of a compound that meets the identification criteria but the quantitative result is less than the specified detection limit but greater than zero.

* - This flag applies to pesticides parameters where the identification has been performed using two column confirmation (as specified in Method 608) but the level is too low for verification of the compound by mass spectrometry.

B - Compound not detected: blank value for the compound was greater than 1/2 of the MDL and greater than 1/2 of the concentration detected in sample.

SAMPLE NUMBER: H1602

GW8

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION CASE NO. : 2903

QC REPORT NO. : 70 ANALYST: MKF DATAFILE: EU06022V07

B. TENTATIVELY IDENTIFIED COMPOUNDS

MKF

CAS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT
				UG/L
115-10-6	METHANE, OXYBIS-	50	997	370
109-87-5	METHANE, DIMETHOXY-	202	962	37
109-99-9	FURAN, TETRAHYDRO-	237	954	41

SAMPLE NUMBER: H1603

GW-B

ORGANICS ANALYSIS DATA SHEET - PAGE 1

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 840602208
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: MKF

CASE NO.: 2903
QC REPORT NO.: 70
CONTRACT NO.: 68-01-6728
DATE SAMPLE RECEIVED: 6-15-84

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 6-16-84
DATE ANALYZED: 07/12/84
PERCENT MOISTURE:

DATAFILE: EU06022C08

(CONC) OR DILUTION FACTOR: 500

PP#	CAS #	COMPOUND	UG/L
(61B)	62-75-9	N-NITROSODIMETHYLAMINE	20 U
(21A)	88-06-2	2,4,6-TRICHLOROPHENOL	20 U
(22A)	59-50-7	P-CHLORO-M-CRESOL	20 U
(24A)	95-57-8	2-CHLOROPHENOL	20 U
(31A)	120-83-2	2,4-DICHLOROPHENOL	20 U
(34A)	105-67-9	2,4-DIMETHYLPHENOL	20 U
(57A)	88-75-5	2-NITROPHENOL	40 U
(58A)	100-02-7	4-NITROPHENOL	100 U
(59A)	51-28-5	2,4-DINITROPHENOL	100 U
(0A)	534-52-1	4,6-DINITRO-2-METHYLPHENOL	40 U
(64A)	87-86-5	PENTACHLOROPHENOL	20 U
(65A)	108-95-2	PHENOL	20 U
( )	65-85-0	BENZOIC ACID	200 U
( )	95-48-7	2-METHYLPHENOL	10 U
( )	108-39-4	4-METHYLPHENOL	10 U
( )	95-95-4	2,4,5-TRICHLOROPHENOL	200 U
(1B)	83-32-9	ACENAPHTHENE	20 U
(5B)	92-87-5	BENZIDINE	80 U
(8B)	120-82-1	1,2,4-TRICHLOROBENZENE	20 U
(9B)	118-74-1	HEXACHLOROBENZENE	20 U
(12B)	67-72-1	HEXACHLOROETHANE	20 U
(18B)	111-44-4	BIS(2-CHLOROETHYL)ETHER	20 U
(20B)	91-58-7	2-CHLORONAPHTHALENE	20 U
(25B)	95-50-1	1,2-DICHLOROBENZENE	20 U
(26B)	541-73-1	1,3-DICHLOROBENZENE	20 U
(27B)	106-46-7	1,4-DICHLOROBENZENE	20 U
(28B)	91-94-1	3,3'-DICHLOROBENZIDINE	40 U
(35B)	121-14-2	2,4-DINITROTOLUENE	40 U
(36B)	606-20-2	2,6-DINITROTOLUENE	40 U
(37B)	122-66-7	1,2-DIPHENYLHYDRAZINE	40 U
(39B)	206-44-0	FLUORANTHENE	20 U
(40B)	7005-72-3	4-CHLOROPHENYL PHENYL ETHER	20 U
(41B)	101-55-3	4-BROMOPHENYL PHENYL ETHER	20 U
(42B)	39638-32-9	BIS(2-CHLOROISOPROPYL) ETHER	40 U
(43B)	111-91-1	BIS(2-CHLOROETHOXY) METHANE	40 U
2B)	87-68-3	HEXACHLOROBUTADIENE	20 U
(53B)	77-47-4	HEXACHLOROCYCLOPENTADIENE	20 U
(54B)	78-59-1	ISOPHORONE	20 U

SAMPLE NUMBER: H1603

SEMIVOLATILE ORGANIC ANALYSIS DATA SHEET CONTINUED

DATAFILE EU06022C08

PP#	CAS #	COMPOUND	UG/L
(55B)	91-20-3	NAPHTHALENE	20 U
(56B)	98-95-3	NITROBENZENE	20 U
(62B)	86-30-6	N-NITROSODIPHENYLAMINE	20 U
(63B)	621-64-7	N-NITROSODIPROPYLAMINE	20 U
(66B)	117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	20 U
(67B)	85-68-7	BENZYL BUTYL PHTHALATE	20 U
(68B)	84-74-2	DI-N-BUTYL PHTHALATE	20 U
(69B)	117-84-0	DI-N-OCTYL PHTHALATE	20 U
(70B)	84-66-2	DIETHYL PHTHALATE	20 U
(71B)	131-11-3	DIMETHYL PHTHALATE	20 U
(72B)	56-55-3	BENZO(A)ANTHRACENE	20 U
(73B)	50-32-8	BENZO(A)PYRENE	40 U
(74B)	205-99-2	BENZO(B)FLUORANTHENE	40 U
(75B)	207-08-9	BENZO(K)FLUORANTHENE	40 U
(76B)	218-01-9	CHRYSENE	40 U
(77B)	208-96-8	ACENAPHTHYLENE	20 U
(78B)	120-12-7	ANTHRACENE	20 U
'9B)	191-24-2	BENZO(GHI)PERYLENE	40 U
,80B)	86-73-7	FLUORENE	20 U
(81B)	85-01-8	PHENANTHRENE	20 U
(82B)	53-70-3	DIBENZO(A,H)ANTHRACENE	40 U
(83B)	193-39-5	INDENO(1,2,3-CD)PYRENE	40 U
(84B)	129-00-0	PYRENE	20 U
( )	62-53-3	ANILINE	20 U
( )	100-51-6	BENZYL ALCOHOL	40 U
( )	106-47-8	4-CHLOROANILINE	100 U
( )	132-64-9	DIBENZOFURAN	20 U
( )	91-57-6	2-METHYLNAPHTHALENE	40 U
( )	88-74-4	2-NITROANILINE	200 U
( )	99-09-2	3-NITROANILINE	200 U
( )	100-01-6	4-NITROANILINE	200 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
K = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
B = AMOUNT IN BLANK IS GREATER THAN 1/2 THE AMOUNT DETECTED
C = AMOUNT HAS BEEN CORRECTED FOR THE AMOUNT IN THE BLANK

SAMPLE NUMBER: H1603

ORGANICS ANALYSIS DATA SHEET (PAGE 2)

ABORATORY NAME: SPECTRIX
_AB SAMPLE ID NO. : 840602208
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: MKF

CASE NO. : 2903
QC REPORT NO. : 70
CONTRACT NO. : 68-01-6728
DATE SAMPLE RECEIVED: 6/15/84

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 06/21/84
DATE ANALYZED: 06/21/84
PERCENT MOISTURE:

PP#	CAS #	COMPOUND	UG/L
(2V)	107-02-8	ACROLEIN	100 U
(3V)	107-13-1	ACRYLONITRILE	100 U
(4V)	71-43-2	BENZENE	5 U
(6V)	56-23-5	CARBON TETRACHLORIDE	5 U
(7V)	108-90-7	CHLOROBENZENE	5 U
(10V)	107-06-2	1, 2-DICHLOROETHANE	1 U
(11V)	71-55-6	1, 1, 1-TRICHLOROETHANE	5 U
(13V)	75-34-3	1, 1-DICHLOROETHANE	5 U
(14V)	79-00-5	1, 1, 2-TRICHLOROETHANE	5 U
(15V)	79-34-5	1, 1, 2, 2-TETRACHLOROETHANE	10 U
16V)	75-00-3	CHLOROETHANE	10 U
(19V)	110-75-8	2-CHLOROETHYLVINYL ETHER	10 U
(23V)	67-66-3	CHLOROFORM	39
(29V)	75-35-4	1, 1-DICHLOROETHENE	5 U
(30V)	156-60-5	TRANS-1, 2-DICHLOROETHENE	5 U
(32V)	78-87-5	1, 2-DICHLOROPROPANE	10 U
(33V)	10061-02-6	TRANS-1, 3-DICHLOROPROPENE	5 U
( )	10061-01-5	CIS-1, 3-DICHLOROPROPENE	5 U
(38V)	100-41-4	ETHYLBENZENE	5 U
(44V)	75-09-2	METHYLENE CHLORIDE	6 ~~11~~ C MKF
(45V)	74-87-3	CHLOROMETHANE	10 U
(46V)	74-83-9	BROMOMETHANE	10 U
(47V)	75-25-2	BROMOFORM	10 U
(48V)	75-27-4	BROMODICHLOROMETHANE	5 U
(49V)	75-69-4	FLUOROTRICHLOROMETHANE	5 U
(50V)	75-71-8	DICHLORODIFLUOROMETHANE	5 U
(51V)	124-48-1	CHLORODIBROMOMETHANE	5 U
(85V)	127-18-4	TETRACHLOROETHENE	5 U
(86V)	108-88-3	TOLUENE	5 U
(87V)	79-01-6	TRICHLOROETHENE	5 U
(88V)	75-01-4	VINYL CHLORIDE	10 U
( )	67-64-1	ACETONE	5 U
( )	78-93-3	2-BUTANONE	5 U
( )	75-15-0	CARBONDISULFIDE	1 U
( )	519-78-6	2-HEXANONE	5 U
( )	108-10-1	4-METHYL-2-PENTANONE	5 U
( )	100-42-5	STYRENE	5 U
( )	108-05-4	VINYL ACETATE	5 U
( )	1330-20-7	TOTAL XYLENES	5 U

000050

U = UNDETECTED AT THE LISTED DETECTION LIMIT
K = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
B = AMOUNT IN BLANK IS GREATER THAN 1/2 THE AMOUNT DETECTED

SPECTRIX DC # 290 -8

Sample Number: H1603
LOW LEVEL WATER

ORGANICS ANALYSIS DATA SHEET - Page 3

FORM II

Laboratory Name: SPECTRIX CORPORATION
Lab Sample I.D. No: 8406022
Date Received: 6/15/84
Date Extracted: 6/20/84

Doc. Control No: 2903-8 -01
Case No: 2903
QC Report No: 70
Date Analyzed: 6/26/84
Factor: Conc. 100 Dil.

PESTICIDES

MULTIPLY ALL VALUES AND DETECTION LIMITS BY .01

PP #	CAS #		ug/l	PP #	CAS #		ug/l
(89P)	309-00-2	aldrin	10 U	(102P)	319-84-6	BHC-Alpha	10 U
(90P)	60-57-1	dieldrin	10 U	(103P)	319-85-7	BHC-Beta	10 U
(91P)	57-74-9	chlordane	10 U	(104P)	319-86-8	BHC-Delta	10 U
(92P)	50-29-3	4,4'-DDT	10 U	(105P)	58-89-9	BHC-Gamma	10 U
(93P)	72-55-9	4,4'-DDE	10 U	(106P)	53469-21-9	PCB-1242	200 U
(94P)	72-54-8	4,4'-DDD	10 U	(107P)	11097-69-7	PCB-1254	200 U
(95P)	115-29-7	endosulfan I	10 U	(108P)	11104-28-2	PCB-1221	200 U
(96P)	115-29-7	endosulfan II	10 U	(109P)	11141-16-5	PCB-1232	200 U
(97P)	1031-07-8	endosulfan sulfate	10 U	(110P)	12672-29-6	PCB-1248	200 U
(98P)	78-20-8	endrin	10 U	(111P)	11096-82-5	PCB-1260	200 U
(99P)	7421-43-4	endrin aldehyde	10 U	(112P)	12674-11-2	PCB-1016	200 U
(100P)	76-44-8	heptachlor	10 U	(113P)	8001-35-2	toxaphene	200 U
(101P)	1024-57-3	heptachlor epoxide	10 U				

FACTOR: $\frac{5}{500}$ [V_F(mL)]x $\frac{1}{}$ [D.F.] = .01

MKF

V_F = Final volume of extract D.F. = Dilution factor

V_I = Initial weight of sample extracted

DIOXINS N/A

MULTIPLY ALL VALUES AND DETECTION LIMITS BY _____

Date Analyzed: _____
Factor: Conc._____ Dil.___

PP #	CAS #		ug/l
(125P)	1747-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	5 U

FACTOR: _____ [V_F(mL)]x _____ [D.F.] =

[V_I(mL)]

V_F = Final volume of extract D.F. = Dilution factor

V_I = Initial weight of sample extracted

DATA REPORTING QUALIFIERS

Value - If the result is a value greater than or equal to the detection limit, report the value.

U - Indicates compound was analyzed for but not detected. The number is the minimum detection limit.

K - Actual value, within the limitations of this method, is less than the value given. The mass spectral data indicates the presence of a compound that meets the identification criteria but the quantitative result is less than the specified detection limit but greater than zero.

** - This flag applies to pesticides parameters where the identification has been performed using two column confirmation (as specified in Method 608) but the level is too low for verification of the compound by mass spectrometry.

B - Compound not detected: blank value for the compound was greater than 1/2 of the MDL and greater than 1/2 of the concentration detected in sample.

SPEC IX DC # 2903-08- 8

SAMPLE NUMBER: H1604

SW-1

ORGANICS ANALYSIS DATA SHEET - PAGE 1

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 840602209
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: MKF

CASE NO.: 2903
QC REPORT NO.: 70
CONTRACT NO.: 68-01-6728
DATE SAMPLE RECEIVED: 6-15-84

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 6-16-84
DATE ANALYZED: 07/12/84
PERCENT MOISTURE:

DATAFILE: EU06022C09

(CONC) OR DILUTION FACTOR: 500

PP#	CAS #	COMPOUND	UG/L
(61B)	62-75-9	N-NITROSODIMETHYLAMINE	20 U
(21A)	88-06-2	2,4,6-TRICHLOROPHENOL	20 U
(22A)	59-50-7	P-CHLORO-M-CRESOL	20 U
(24A)	95-57-8	2-CHLOROPHENOL	20 U
(31A)	120-83-2	2,4-DICHLOROPHENOL	20 U
(34A)	105-67-9	2,4-DIMETHYLPHENOL	20 U
(57A)	88-75-5	2-NITROPHENOL	40 U
(58A)	100-02-7	4-NITROPHENOL	100 U
(59A)	51-28-5	2,4-DINITROPHENOL	100 U
(0A)	534-52-1	4,6-DINITRO-2-METHYLPHENOL	40 U
(64A)	87-86-5	PENTACHLOROPHENOL	20 U
(65A)	108-95-2	PHENOL	20 U
( )	65-85-0	BENZOIC ACID	200 U
( )	95-48-7	2-METHYLPHENOL	10 U
( )	108-39-4	4-METHYLPHENOL	10 U
( )	95-95-4	2,4,5-TRICHLOROPHENOL	200 U
(1B)	83-32-9	ACENAPHTHENE	20 U
(5B)	92-87-5	BENZIDINE	80 U
(8B)	120-82-1	1,2,4-TRICHLOROBENZENE	20 U
(9B)	118-74-1	HEXACHLOROBENZENE	20 U
(12B)	67-72-1	HEXACHLOROETHANE	20 U
(18B)	111-44-4	BIS(2-CHLOROETHYL)ETHER	20 U
(20B)	91-58-7	2-CHLORONAPHTHALENE	20 U
(25B)	95-50-1	1,2-DICHLOROBENZENE	20 U
(26B)	541-73-1	1,3-DICHLOROBENZENE	20 U
(27B)	106-46-7	1,4-DICHLOROBENZENE	20 U
(28B)	91-94-1	3,3'-DICHLOROBENZIDINE	40 U
(35B)	121-14-2	2,4-DINITROTOLUENE	40 U
(36B)	606-20-2	2,6-DINITROTOLUENE	40 U
(37B)	122-66-7	1,2-DIPHENYLHYDRAZINE	40 U
(39B)	206-44-0	FLUORANTHENE	20 U
(40B)	7005-72-3	4-CHLOROPHENYL PHENYL ETHER	20 U
(41B)	101-55-3	4-BROMOPHENYL PHENYL ETHER	20 U
(42B)	39638-32-9	BIS(2-CHLOROISOPROPYL) ETHER	40 U
(43B)	111-91-1	BIS(2-CHLOROETHOXY) METHANE	40 U
(2B)	87-68-3	HEXACHLOROBUTADIENE	20 U
(53B)	77-47-4	HEXACHLOROCYCLOPENTADIENE	20 U
(54B)	78-59-1	ISOPHORONE	20 U

SAMPLE NUMBER: H1604

EMIVOLATILE ORGANIC ANALYSIS DATA SHEET CONTINUED

DATAFILE EU06022C09

PP#	CAS #	COMPOUND	UG/L
(55B)	91-20-3	NAPHTHALENE	20 U
(56B)	98-95-3	NITROBENZENE	20 U
(62B)	86-30-6	N-NITROSODIPHENYLAMINE	20 U
(63B)	621-64-7	N-NITROSODIPROPYLAMINE	20 U
(66B)	117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	1200
(67B)	85-68-7	BENZYL BUTYL PHTHALATE	20 U
(68B)	84-74-2	DI-N-BUTYL PHTHALATE	20 K
(69B)	117-84-0	DI-N-OCTYL PHTHALATE	20 U
(70B)	84-66-2	DIETHYL PHTHALATE	20 U
(71B)	131-11-3	DIMETHYL PHTHALATE	20 U
(72B)	56-55-3	BENZO(A)ANTHRACENE	20 U
(73B)	50-32-8	BENZO(A)PYRENE	40 U
(74B)	205-99-2	BENZO(B)FLUORANTHENE	40 U
(75B)	207-08-9	BENZO(K)FLUORANTHENE	40 U
(76B)	218-01-9	CHRYSENE	40 U
(77B)	208-96-8	ACENAPHTHYLENE	20 U
(78B)	120-12-7	ANTHRACENE	20 U
(79B)	191-24-2	BENZO(GHI)PERYLENE	40 U
(80B)	86-73-7	FLUORENE	20 U
(81B)	85-01-8	PHENANTHRENE	20 U
(82B)	53-70-3	DIBENZO(A,H)ANTHRACENE	40 U
(83B)	193-39-5	INDENO(1,2,3-CD)PYRENE	40 U
(84B)	129-00-0	PYRENE	20 U
( )	62-53-3	ANILINE	20 U
( )	100-51-6	BENZYL ALCOHOL	40 U
( )	106-47-8	4-CHLOROANILINE	100 U
( )	132-64-9	DIBENZOFURAN	20 U
( )	91-57-6	2-METHYLNAPHTHALENE	40 U
( )	88-74-4	2-NITROANILINE	200 U
( )	99-09-2	3-NITROANILINE	200 U
( )	100-01-6	4-NITROANILINE	200 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
K = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
B = AMOUNT IN BLANK IS GREATER THAN 1/2 THE AMOUNT DETECTED
C = AMOUNT HAS BEEN CORRECTED FOR THE AMOUNT IN THE BLANK

SAMPLE NUMBER: H1604

ORGANICS ANALYSIS DATA SHEET (PAGE 2)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO. : 840602209
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: MKF

CASE NO. : 2903
QC REPORT NO. : 70
CONTRACT NO. : 68-01-6728
DATE SAMPLE RECEIVED: 6/15/84

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 06/21/84
DATE ANALYZED: 06/21/84
PERCENT MOISTURE:

PP#	CAS #	COMPOUND	UG/L
(2V)	107-02-8	ACROLEIN	100 U
(3V)	107-13-1	ACRYLONITRILE	100 U
(4V)	71-43-2	BENZENE	5 U
(6V)	56-23-5	CARBON TETRACHLORIDE	5 U
(7V)	108-90-7	CHLOROBENZENE	5 U
(10V)	107-06-2	1, 2-DICHLOROETHANE	1 U
(11V)	71-55-6	1, 1, 1-TRICHLOROETHANE	5 U
(13V)	75-34-3	1, 1-DICHLOROETHANE	5 U
(14V)	79-00-5	1, 1, 2-TRICHLOROETHANE	5 U
(15V)	79-34-5	1, 1, 2, 2-TETRACHLOROETHANE	10 U
(16V)	75-00-3	CHLOROETHANE	10 U
(19V)	110-75-8	2-CHLOROETHYLVINYL ETHER	10 U
(23V)	67-66-3	CHLOROFORM	9
(29V)	75-35-4	1, 1-DICHLOROETHENE	5 U
(30V)	156-60-5	TRANS-1, 2-DICHLOROETHENE	5 U
(32V)	78-87-5	1, 2-DICHLOROPROPANE	10 U
(33V)	10061-02-6	TRANS-1, 3-DICHLOROPROPENE	5 U
( )	10061-01-5	CIS-1, 3-DICHLOROPROPENE	5 U
(38V)	100-41-4	ETHYLBENZENE	5 U
(44V)	75-09-2	METHYLENE CHLORIDE	5 C MKF
(45V)	74-87-3	CHLOROMETHANE	10 U
(46V)	74-83-9	BROMOMETHANE	10 U
(47V)	75-25-2	BROMOFORM	10 U
(48V)	75-27-4	BROMODICHLOROMETHANE	5 U
(49V)	75-69-4	FLUOROTRICHLOROMETHANE	5 U
(50V)	75-71-8	DICHLORODIFLUOROMETHANE	5 U
(51V)	124-48-1	CHLORODIBROMOMETHANE	5 U
(85V)	127-18-4	TETRACHLOROETHENE	5 U
(86V)	108-88-3	TOLUENE	5 U
(87V)	79-01-6	TRICHLOROETHENE	5 U
(88V)	75-01-4	VINYL CHLORIDE	10 U
( )	67-64-1	ACETONE	5 U
( )	78-93-3	2-BUTANONE	5 U
( )	75-15-0	CARBONDISULFIDE	1 U
( )	519-78-6	2-HEXANONE	5 U
( )	108-10-1	4-METHYL-2-PENTANONE	5 U
( )	100-42-5	STYRENE	5 U
( )	108-05-4	VINYL ACETATE	5 U
( )	1330-20-7	TOTAL XYLENES	5 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
K = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
B = AMOUNT IN BLANK IS GREATER THAN 1/2 THE AMOUNT DETECTED

SPECTRIX DC . 2903-8-8

Sample Number
H1604
LOW LEVEL WATER

ORGANICS ANALYSIS DATA SHEET - Page 3

FORM II

Laboratory Name: SPECTRIX CORPORATION
Lab Sample I.D. No: 8406022
Date Received: 6/15/84
Date Extracted: 6/20/84

Doc. Control No: 2903-8 -69
Case No: 2903
QC Report No: 70
Date Analyzed: 6/26/84
Factor: Conc. 100 Dil.

PESTICIDES

MULTIPLY ALL VALUES AND DETECTION LIMITS BY .01

PP #	CAS #		ug/l
(89P)	309-00-2	aldrin	10 U
(90P)	60-57-1	dieldrin	10 U
(91P)	57-74-9	chlordane	10 U
(92P)	50-29-3	4,4'-DDT	10 U
(93P)	72-55-9	4,4'-DDE	10 U
(94P)	72-54-8	4,4'-DDD	10 U
(95P)	115-29-7	endosulfan I	10 U
(96P)	115-29-7	endosulfan II	10 U
(97P)	1031-07-8	endosulfan sulfate	10 U
(98P)	72-20-8	endrin	10 U
(99P)	7421-43-4	endrin aldelyde	10 U
(100P)	76-44-8	heptachlor	10 U
(101P)	1024-57-3	heptachlor epoxide	10 U

PP #	CAS #		ug/l
(102P)	319-84-6	BHC-Alpha	10 U
(103P)	319-85-7	BHC-Beta	10 U
(104P)	319-86-8	BHC-Delta	10 U
(105P)	58-89-9	BHC-Gamma	10 U
(106P)	53469-21-9	PCB-1242	200 U
(107P)	11097-69-7	PCB-1254	200 U
(108P)	11104-28-2	PCB-1221	200 U
(109P)	11141-16-5	PCB-1232	200 U
(110P)	12672-29-6	PCB-1248	200 U
(111P)	11096-82-5	PCB-1260	200 U
(112P)	12674-11-2	PCB-1016	200 U
(113P)	8001-35-2	toxaphene	200 U

FACTOR: $\frac{5}{500}$ [V_P(mL)]x $\frac{1}{}$ [V_I(mL)] [D.F.] = .01

MCF

V_P = Final volume of extract

D.F. = Dilution factor

V_I = Initial weight of sample extracted

DIOXINS N/A

MULTIPLY ALL VALUES AND DETECTION LIMITS BY _____

Date Analyzed: _____
Factor: Conc._____ Dil.___

PP #	CAS #		ug/l
(129P)	1747-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	5 U

FACTOR: _____ [V_P(mL)]x _____ [D.F.] =
[V_I(mL)]

V_P = Final volume of extract

D.F. = Dilution factor

V_I = Initial weight of sample extracted

DATA REPORTING QUALIFIERS

Value - If the result is a value greater than or equal to the detection limit, report the value.

U - Indicates compound was analyzed for but not detected. The number is the minimum detection limit.

E - Actual value, within the limitations of this method, is less than the value given. The mass spectral data indicates the presence of a compound that meets the identification criteria but the quantitative result is less than the specified detection limit but greater than zero.

* - This flag applies to pesticides parameters where the identification has been performed using two column confirmation (as specified in Method 608) but the level is too low for verification of the compound by mass spectrometry.

B - Compound not detected; blank value for the compound was greater than 1/2 of the MDL and greater than 1/2 of the concentration detected in sample.

SAMPLE NUMBER: H1605

SW-2

ORGANICS ANALYSIS DATA SHEET - PAGE 1

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 840602210
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: MKF
CASE NO.: 2903
QC REPORT NO.: 70
CONTRACT NO.: 68-01-6728
DATE SAMPLE RECEIVED: 6-15-84

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 6-16-84
DATE ANALYZED: 07/12/84
PERCENT MOISTURE:
DATAFILE: EU06022C10
CONC. OR DILUTION FACTOR: 500

PP#	CAS #	COMPOUND	UG/L
(61B)	62-75-9	N-NITROSODIMETHYLAMINE	20 U
(21A)	88-06-2	2,4,6-TRICHLOROPHENOL	20 U
(22A)	59-50-7	P-CHLORO-M-CRESOL	20 U
(24A)	95-57-8	2-CHLOROPHENOL	20 U
(31A)	120-83-2	2,4-DICHLOROPHENOL	20 U
(34A)	105-67-9	2,4-DIMETHYLPHENOL	20 U
(57A)	88-75-5	2-NITROPHENOL	40 U
(58A)	100-02-7	4-NITROPHENOL	100 U
(59A)	51-28-5	2,4-DINITROPHENOL	100 U
(0A)	534-52-1	4,6-DINITRO-2-METHYLPHENOL	40 U
(64A)	87-86-5	PENTACHLOROPHENOL	20 U
(65A)	108-95-2	PHENOL	20 U
( )	65-85-0	BENZOIC ACID	200 U
( )	95-48-7	2-METHYLPHENOL	10 U
( )	108-39-4	4-METHYLPHENOL	10 U
( )	95-95-4	2,4,5-TRICHLOROPHENOL	200 U
(1B)	83-32-9	ACENAPHTHENE	20 U
(5B)	92-87-5	BENZIDINE	80 U
(8B)	120-82-1	1,2,4-TRICHLOROBENZENE	20 U
(9B)	118-74-1	HEXACHLOROBENZENE	20 U
(12B)	67-72-1	HEXACHLOROETHANE	20 U
(18B)	111-44-4	BIS(2-CHLOROETHYL)ETHER	20 U
(20B)	91-58-7	2-CHLORONAPHTHALENE	20 U
(25B)	95-50-1	1,2-DICHLOROBENZENE	20 U
(26B)	541-73-1	1,3-DICHLOROBENZENE	20 U
(27B)	106-46-7	1,4-DICHLOROBENZENE	20 U
(28B)	91-94-1	3,3'-DICHLOROBENZIDINE	40 U
(35B)	121-14-2	2,4-DINITROTOLUENE	40 U
(36B)	606-20-2	2,6-DINITROTOLUENE	40 U
(37B)	122-66-7	1,2-DIPHENYLHYDRAZINE	40 U
(39B)	206-44-0	FLUORANTHENE	20 U
(40B)	7005-72-3	4-CHLOROPHENYL PHENYL ETHER	20 U
(41B)	101-55-3	4-BROMOPHENYL PHENYL ETHER	20 U
(42B)	39638-32-9	BIS(2-CHLOROISOPROPYL) ETHER	40 U
(43B)	111-91-1	BIS(2-CHLOROETHOXY) METHANE	40 U
2B)	87-68-3	HEXACHLOROBUTADIENE	20 U
(53B)	77-47-4	HEXACHLOROCYCLOPENTADIENE	20 U
(54B)	78-59-1	ISOPHORONE	20 U

SAMPLE NUMBER: H1605

SEMIVOLATILE ORGANIC ANALYSIS DATA SHEET CONTINUED

DATAFILE EU06022C10

PP#	CAS #	COMPOUND	UG/L
(55B)	91-20-3	NAPHTHALENE	20 U
(56B)	98-95-3	NITROBENZENE	20 U
(62B)	86-30-6	N-NITROSODIPHENYLAMINE	20 U
(63B)	621-64-7	N-NITROSODIPROPYLAMINE	20 U
(66B)	117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	20 K
(67B)	85-68-7	BENZYL BUTYL PHTHALATE	20 U
(68B)	84-74-2	DI-N-BUTYL PHTHALATE	20 K
(69B)	117-84-0	DI-N-OCTYL PHTHALATE	20 U
(70B)	84-66-2	DIETHYL PHTHALATE	20 U
(71B)	131-11-3	DIMETHYL PHTHALATE	20 U
(72B)	56-55-3	BENZO(A)ANTHRACENE	20 U
(73B)	50-32-8	BENZO(A)PYRENE	40 U
(74B)	205-99-2	BENZO(B)FLUORANTHENE	40 U
(75B)	207-08-9	BENZO(K)FLUORANTHENE	40 U
(76B)	218-01-9	CHRYSENE	40 U
(77B)	208-96-8	ACENAPHTHYLENE	20 U
(78B)	120-12-7	ANTHRACENE	20 U
(79B)	191-24-2	BENZO(GHI)PERYLENE	40 U
(80B)	86-73-7	FLUORENE	20 U
(81B)	85-01-8	PHENANTHRENE	20 U
(82B)	53-70-3	DIBENZO(A,H)ANTHRACENE	40 U
(83B)	193-39-5	INDENO(1,2,3-CD)PYRENE	40 U
(84B)	129-00-0	PYRENE	20 U
( )	62-53-3	ANILINE	20 U
( )	100-51-6	BENZYL ALCOHOL	40 U
( )	106-47-8	4-CHLOROANILINE	100 U
( )	132-64-9	DIBENZOFURAN	20 U
( )	91-57-6	2-METHYLNAPHTHALENE	40 U
( )	88-74-4	2-NITROANILINE	200 U
( )	99-09-2	3-NITROANILINE	200 U
( )	100-01-6	4-NITROANILINE	200 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
K = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
B = AMOUNT IN BLANK IS GREATER THAN 1/2 THE AMOUNT DETECTED
C = AMOUNT HAS BEEN CORRECTED FOR THE AMOUNT IN THE BLANK

SAMPLE NUMBER: H1605

ORGANICS ANALYSIS DATA SHEET (PAGE 2)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 840602210
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: MKF

CASE NO.: 2903
QC REPORT NO.: 70
CONTRACT NO.: 68-01-6728
DATE SAMPLE RECEIVED: 6/15/84

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 06/21/84
DATE ANALYZED: 06/21/84
PERCENT MOISTURE:

PP#	CAS #	COMPOUND	UG/L
(2V)	107-02-8	ACROLEIN	100 U
(3V)	107-13-1	ACRYLONITRILE	100 U
(4V)	71-43-2	BENZENE	5 U
(6V)	56-23-5	CARBON TETRACHLORIDE	5 U
(7V)	108-90-7	CHLOROBENZENE	5 U
(10V)	107-06-2	1, 2-DICHLOROETHANE	1 U
(11V)	71-55-6	1, 1, 1-TRICHLOROETHANE	5 U
(13V)	75-34-3	1, 1-DICHLOROETHANE	5 U
(14V)	79-00-5	1, 1, 2-TRICHLOROETHANE	5 U
(15V)	79-34-5	1, 1, 2, 2-TETRACHLOROETHANE	10 U
'16V)	75-00-3	CHLOROETHANE	10 U
.19V)	110-75-8	2-CHLOROETHYLVINYL ETHER	10 U
(23V)	67-66-3	CHLOROFORM	5 U
(29V)	75-35-4	1, 1-DICHLOROETHENE	5 U
(30V)	156-60-5	TRANS-1, 2-DICHLOROETHENE	5 U
(32V)	78-87-5	1, 2-DICHLOROPROPANE	10 U
(33V)	10061-02-6	TRANS-1, 3-DICHLOROPROPENE	5 U
( )	10061-01-5	CIS-1, 3-DICHLOROPROPENE	5 U
(38V)	100-41-4	ETHYLBENZENE	5 U
(44V)	75-09-2	METHYLENE CHLORIDE	2 JKB
(45V)	74-87-3	CHLOROMETHANE	10 U
(46V)	74-83-9	BROMOMETHANE	10 U
(47V)	75-25-2	BROMOFORM	10 U
(48V)	75-27-4	BROMODICHLOROMETHANE	5 U
(49V)	75-69-4	FLUOROTRICHLOROMETHANE	5 U
(50V)	75-71-8	DICHLORODIFLUOROMETHANE	5 U
(51V)	124-48-1	CHLORODIBROMOMETHANE	5 U
(85V)	127-18-4	TETRACHLOROETHENE	5 U
(86V)	108-88-3	TOLUENE	5 U
(87V)	79-01-6	TRICHLOROETHENE	5 U
(88V)	75-01-4	VINYL CHLORIDE	10 U
( )	67-64-1	ACETONE	5 U
( )	78-93-3	2-BUTANONE	5 U
( )	75-15-0	CARBONDISULFIDE	1 U
( )	519-78-6	2-HEXANONE	5 U
( )	108-10-1	4-METHYL-2-PENTANONE	5 U
)	100-42-5	STYRENE	5 U
)	108-05-4	VINYL ACETATE	5 U
( )	1330-20-7	TOTAL XYLENES	5 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
K = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
B = AMOUNT IN BLANK IS GREATER THAN 1/2 THE AMOUNT DETECTED

SPECTRIX DC # 290 -8

Sample Number: H1605
LOW LEVEL WATER

ORGANICS ANALYSIS DATA SHEET - Page 3

FORM II

Laboratory Name: SPECTRIX CORPORATION
Lab Sample I.D. No: 8406022
Date Received: 6/15/84
Date Extracted: 6/20/84

Doc. Control No: 2903-8 -08
Case No: 2903
QC Report No: 70
Date Analyzed: 6/26/84
Factor: Conc. 100 Dil.

PESTICIDES

MULTIPLY ALL VALUES AND DETECTION LIMITS BY .01

PP #	CAS #		ug/l
(89P)	309-00-2	aldrin	10 U
(90P)	60-57-1	dieldrin	10 U
(91P)	57-74-9	chlordane	10 U
(92P)	50-29-3	4,4'-DDT	10 U
(93P)	72-55-9	4,4'-DDE	10 U
(94P)	72-54-8	4,4'-DDD	10 U
(95P)	115-29-7	endosulfan I	10 U
(96P)	115-29-7	endosulfan II	10 U
(97P)	1031-07-8	endosulfan sulfate	10 U
(98P)	72-20-8	endrin	10 U
(99P)	7421-43-4	endrin aldehyde	10 U
(100P)	76-44-8	heptachlor	10 U
(101P)	1024-57-3	heptachlor epoxide	10 U

PP #	CAS #		ug/l
(102P)	319-84-6	BHC-Alpha	10 U
(103P)	319-85-7	BHC-Beta	10 U
(104P)	319-86-8	BHC-Delta	10 U
(105P)	58-89-9	BHC-Gamma	10 U
(106P)	53469-21-9	PCB-1242	200 U
(107P)	11097-69-7	PCB-1254	200 U
(108P)	11104-28-2	PCB-1221	200 U
(109P)	11141-16-5	PCB-1232	200 U
(110P)	12672-29-6	PCB-1248	200 U
(111P)	11096-82-5	PCB-1260	200 U
(112P)	12674-11-2	PCB-1016	200 U
(113P)	8001-35-2	toxaphene	200 U

FACTOR: $\frac{5}{500}$ [V_F(mL)]x $\frac{1}{}$ [D.F.] = .01

NKF

V_F = Final volume of extract D.F. = Dilution factor

V_I = Initial weight of sample extracted

DIOXINS N/A

MULTIPLY ALL VALUES AND DETECTION LIMITS BY _____

Date Analyzed: _____
Factor: Conc. _____ Dil. ___

PP #	CAS #		ug/l
(129P)	1747-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	5 U

FACTOR: _____ [V_F(mL)]x _____ [D.F.] =
[V_I(mL)]

V_F = Final volume of extract D.F. = Dilution factor

V_I = Initial weight of sample extracted

DATA REPORTING QUALIFIERS

Value - If the result is a value greater than or equal to the detection limit, report the value.

U - Indicates compound was analyzed for but not detected. The number is the minimum detection limit.

E - Actual value, within the limitations of this method, is less than the value given. The mass spectral data indicates the presence of a compound that meets the identification criteria but the quantitative result is less than the specified detection limit but greater than zero.

** - This flag applies to pesticides parameters where the identification has been performed using two column confirmation (as specified in Method 608) but the level is too low for verification of the compound by mass spectrometry.

B - Compound not detected: blank value for the compound was greater than 1/2 of the MDL and greater than 1/2 of the concentration detected in sample.

SAMPLE NUMBER: H1606

GW-3

ORGANICS ANALYSIS DATA SHEET - PAGE 1

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 840602211
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: MKF

CASE NO.: 2903
QC REPORT NO.: 70
CONTRACT NO.: 68-01-6728
DATE SAMPLE RECEIVED: 6-15-84

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 6-16-84
DATE ANALYZED: 07/12/84
PERCENT MOISTURE:

DATAFILE: EU06022C11
(CONC.) OR DILUTION FACTOR: 500

PP#	CAS #	COMPOUND	UG/L
(61B)	62-75-9	N-NITROSODIMETHYLAMINE	20 U
(21A)	88-06-2	2,4,6-TRICHLOROPHENOL	20 U
(22A)	59-50-7	P-CHLORO-M-CRESOL	20 U
(24A)	95-57-8	2-CHLOROPHENOL	20 U
(31A)	120-83-2	2,4-DICHLOROPHENOL	20 U
(34A)	105-67-9	2,4-DIMETHYLPHENOL	20 U
(57A)	88-75-5	2-NITROPHENOL	40 U
(58A)	100-02-7	4-NITROPHENOL	100 U
(59A)	51-28-5	2,4-DINITROPHENOL	100 U
(60A)	534-52-1	4,6-DINITRO-2-METHYLPHENOL	40 U
(64A)	87-86-5	PENTACHLOROPHENOL	20 U
(65A)	108-95-2	PHENOL	20 U
( )	65-85-0	BENZOIC ACID	200 U
( )	95-48-7	2-METHYLPHENOL	10 U
( )	108-39-4	4-METHYLPHENOL	10 U
( )	95-95-4	2,4,5-TRICHLOROPHENOL	200 U
(1B)	83-32-9	ACENAPHTHENE	20 U
(5B)	92-87-5	BENZIDINE	80 U
(8B)	120-82-1	1,2,4-TRICHLOROBENZENE	20 U
(9B)	118-74-1	HEXACHLOROBENZENE	20 U
(12B)	67-72-1	HEXACHLOROETHANE	20 U
(18B)	111-44-4	BIS(2-CHLOROETHYL)ETHER	20 U
(20B)	91-58-7	2-CHLORONAPHTHALENE	20 U
(25B)	95-50-1	1,2-DICHLOROBENZENE	20 U
(26B)	541-73-1	1,3-DICHLOROBENZENE	20 U
(27B)	106-46-7	1,4-DICHLOROBENZENE	20 U
(28B)	91-94-1	3,3'-DICHLOROBENZIDINE	40 U
(35B)	121-14-2	2,4-DINITROTOLUENE	40 U
(36B)	606-20-2	2,6-DINITROTOLUENE	40 U
(37B)	122-66-7	1,2-DIPHENYLHYDRAZINE	40 U
(39B)	206-44-0	FLUORANTHENE	20 U
(40B)	7005-72-3	4-CHLOROPHENYL PHENYL ETHER	20 U
(41B)	101-55-3	4-BROMOPHENYL PHENYL ETHER	20 U
(42B)	39638-32-9	BIS(2-CHLOROISOPROPYL) ETHER	40 U
(43B)	111-91-1	BIS(2-CHLOROETHOXY) METHANE	40 U
(2B)	87-68-3	HEXACHLOROBUTADIENE	20 U
(53B)	77-47-4	HEXACHLOROCYCLOPENTADIENE	20 U
(54B)	78-59-1	ISOPHORONE	20 U

SAMPLE NUMBER: H1606

EMIVOLATILE ORGANIC ANALYSIS DATA SHEET CONTINUED

DATAFILE EU06022C11

PP#	CAS #	COMPOUND	UG/L
(55B)	91-20-3	NAPHTHALENE	20 U
(56B)	98-95-3	NITROBENZENE	20 U
(62B)	86-30-6	N-NITROSODIPHENYLAMINE	20 U
(63B)	621-64-7	N-NITROSODIPROPYLAMINE	20 U
(66B)	117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	25
(67B)	85-68-7	BENZYL BUTYL PHTHALATE	20 K
(68B)	84-74-2	DI-N-BUTYL PHTHALATE	20 K
(69B)	117-84-0	DI-N-OCTYL PHTHALATE	20 U
(70B)	84-66-2	DIETHYL PHTHALATE	20 U
(71B)	131-11-3	DIMETHYL PHTHALATE	20 U
(72B)	56-55-3	BENZO(A)ANTHRACENE	20 U
(73B)	50-32-8	BENZO(A)PYRENE	40 U
(74B)	205-99-2	BENZO(B)FLUORANTHENE	40 U
(75B)	207-08-9	BENZO(K)FLUORANTHENE	40 U
(76B)	218-01-9	CHRYSENE	40 U
(77B)	208-96-8	ACENAPHTHYLENE	20 U
(78B)	120-12-7	ANTHRACENE	20 U
(79B)	191-24-2	BENZO(GHI)PERYLENE	40 U
(80B)	86-73-7	FLUORENE	20 U
(81B)	85-01-8	PHENANTHRENE	20 U
(82B)	53-70-3	DIBENZO(A,H)ANTHRACENE	40 U
(83B)	193-39-5	INDENO(1,2,3-CD)PYRENE	40 U
(84B)	129-00-0	PYRENE	20 U
( )	62-53-3	ANILINE	20 U
( )	100-51-6	BENZYL ALCOHOL	40 U
( )	106-47-8	4-CHLOROANILINE	100 U
( )	132-64-9	DIBENZOFURAN	20 U
( )	91-57-6	2-METHYLNAPHTHALENE	40 U
( )	88-74-4	2-NITROANILINE	200 U
( )	99-09-2	3-NITROANILINE	200 U
( )	100-01-6	4-NITROANILINE	200 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
K = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
B = AMOUNT IN BLANK IS GREATER THAN 1/2 THE AMOUNT DETECTED
C = AMOUNT HAS BEEN CORRECTED FOR THE AMOUNT IN THE BLANK

SAMPLE NUMBER: H1606

ORGANICS ANALYSIS DATA SHEET (PAGE 2)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 840602211
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: MKF

CASE NO.: 2903
QC REPORT NO.: 70
CONTRACT NO.: 68-01-6728
DATE SAMPLE RECEIVED: 6/15/84

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 06/21/84
DATE ANALYZED: 06/21/84
PERCENT MOISTURE:

PP#	CAS #	COMPOUND	UG/L
(2V)	107-02-8	ACROLEIN	100 U
(3V)	107-13-1	ACRYLONITRILE	100 U
(4V)	71-43-2	BENZENE	5 U
(6V)	56-23-5	CARBON TETRACHLORIDE	5 U
(7V)	108-90-7	CHLOROBENZENE	5 U
(10V)	107-06-2	1, 2-DICHLOROETHANE	1 U
(11V)	71-55-6	1, 1, 1-TRICHLOROETHANE	5 U
(13V)	75-34-3	1, 1-DICHLOROETHANE	5 U
(14V)	79-00-5	1, 1, 2-TRICHLOROETHANE	5 U
(15V)	79-34-5	1, 1, 2, 2-TETRACHLOROETHANE	10 U
(16V)	75-00-3	CHLOROETHANE	10 U
(19V)	110-75-8	2-CHLOROETHYLVINYL ETHER	10 U
(23V)	67-66-3	CHLOROFORM	15
(29V)	75-35-4	1, 1-DICHLOROETHENE	5 U
(30V)	156-60-5	TRANS-1, 2-DICHLOROETHENE	5 U
(32V)	78-87-5	1, 2-DICHLOROPROPANE	10 U
(33V)	10061-02-6	TRANS-1, 3-DICHLOROPROPENE	5 U
( )	10061-01-5	CIS-1, 3-DICHLOROPROPENE	5 U
(38V)	100-41-4	ETHYLBENZENE	5 U
(44V)	75-09-2	METHYLENE CHLORIDE	6 C MKF
(45V)	74-87-3	CHLOROMETHANE	10 U
(46V)	74-83-9	BROMOMETHANE	10 U
(47V)	75-25-2	BROMOFORM	10 U
(48V)	75-27-4	BROMODICHLOROMETHANE	5 U
(49V)	75-69-4	FLUOROTRICHLOROMETHANE	5 U
(50V)	75-71-8	DICHLORODIFLUOROMETHANE	5 U
(51V)	124-48-1	CHLORODIBROMOMETHANE	5 U
(85V)	127-18-4	TETRACHLOROETHENE	5 U
(86V)	108-88-3	TOLUENE	5 U
(87V)	79-01-6	TRICHLOROETHENE	5 U
(88V)	75-01-4	VINYL CHLORIDE	10 U
( )	67-64-1	ACETONE	5 U
( )	78-93-3	2-BUTANONE	5 U
( )	75-15-0	CARBONDISULFIDE	1 U
( )	519-78-6	2-HEXANONE	5 U
( )	108-10-1	4-METHYL-2-PENTANONE	5 U
( )	100-42-5	STYRENE	5 U
( )	108-05-4	VINYL ACETATE	5 U
( )	1330-20-7	TOTAL XYLENES	5 U

000104

U = UNDETECTED AT THE LISTED DETECTION LIMIT
K = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
B = AMOUNT IN BLANK IS GREATER THAN 1/2 THE AMOUNT DETECTED

SPECTRIX DC # 2903-8

Sample Number
H 1606
LOW LEVEL WATER

ORGANICS ANALYSIS DATA SHEET - Page 3

FORM II

Laboratory Name: SPECTRIX CORPORATION
Lab Sample I.D. No: 8406022
Date Received: 6/15/84
Date Extracted: 6/20/84

Doc. Control No: 2903-8 -08
Case No: 2903
QC Report No: 70
Date Analyzed: 6/26/84

PESTICIDES

Factor: Conc. 100 Dil.

MULTIPLY ALL VALUES AND DETECTION LIMITS BY .01

PP #	CAS #		ug/l
(89P)	309-00-2	aldrin	10 U
(90P)	60-57-1	dieldrin	10 U
(91P)	57-74-9	chlordane	10 U
(92P)	50-29-3	4,4'-DDT	10 U
(93P)	72-55-9	4,4'-DDE	10 U
(94P)	72-54-8	4,4'-DDD	10 U
(95P)	115-29-7	endosulfan I	10 U
(96P)	115-29-7	endosulfan II	10 U
(97P)	1031-07-8	endosulfan sulfate	10 U
(98P)	78-20-8	endrin	10 U
(99P)	7421-43-4	endrin aldehyde	10 U
(100P)	76-44-8	heptachlor	10 U
(101P)	1024-57-3	heptachlor epoxide	10 U

PP #	CAS #		ug/l
(102P)	319-84-6	BHC-Alpha	10 U
(103P)	319-85-7	BHC-Beta	10 U
(104P)	319-86-8	BHC-Delta	10 U
(105P)	58-89-9	BHC-Gamma	10 U
(106P)	53469-21-9	PCB-1242	200 U
(107P)	11097-69-7	PCB-1254	200 U
(108P)	11104-28-2	PCB-1221	200 U
(109P)	11141-16-5	PCB-1232	200 U
(110P)	12672-29-6	PCB-1248	200 U
(111P)	11096-82-5	PCB-1260	200 U
(112P)	12674-11-2	PCB-1016	200 U
(113P)	8001-35-2	toxaphene	200 U

FACTOR: $\frac{5}{500}$ [V_F(mL)]x $\frac{1}{}$ [D.F.] = .01

MKF

V_F = Final volume of extract

D.F. = Dilution factor

V_I = Initial weight of sample extracted

DIOXINS N/A

MULTIPLY ALL VALUES AND DETECTION LIMITS BY _____

Date Analyzed: _____

Factor: Conc._____ Dil.___

PP #	CAS #		ug/l
(129B)	1747-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	5 U

FACTOR: _____ [V_F(mL)]x _____ [D.F.] =
[V_I(mL)]

V_F = Final volume of extract

D.F. = Dilution factor

V_I = Initial weight of sample extracted

DATA REPORTING QUALIFIERS

Value - If the result is a value greater than or equal to the detection limit, report the value.

U - Indicates compound was analyzed for but not detected. The number is the minimum detection limit.

K - Actual value, within the limitations of this method, is less than the value given. The mass spectral data indicates the presence of a compound that meets the identification criteria but the quantitative result is less than the specified detection limit but greater than zero.

ea - This flag applies to pesticides parameters where the identification has been performed using two column confirmation (as specified in Method 608) but the level is too low for verification of the compound by mass spectrometry.

B - Compound not detected: blank value for the compound was greater than 1/2 of the MDL and greater than 1/2 of the concentration detected in sample.

000105

SPECTRIX DC # 2903-08- B

SAMPLE NUMBER: H1607

GW-60

ORGANICS ANALYSIS DATA SHEET - PAGE 1

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 840602212
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: MKF

CASE NO.: 2903
QC REPORT NO.: 70
CONTRACT NO.: 68-01-6728
DATE SAMPLE RECEIVED: 6-15-84

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 6-16-84
DATE ANALYZED: 07/12/84
PERCENT MOISTURE:

DATAFILE: EU06022C12
(CONC.) OR DILUTION FACTOR: 50

PP#	CAS #	COMPOUND	UG/L
(61B)	62-75-9	N-NITROSODIMETHYLAMINE	200 U
(21A)	88-06-2	2,4,6-TRICHLOROPHENOL	200 U
(22A)	59-50-7	P-CHLORO-M-CRESOL	200 U
(24A)	95-57-8	2-CHLOROPHENOL	200 U
(31A)	120-83-2	2,4-DICHLOROPHENOL	200 U
(34A)	105-67-9	2,4-DIMETHYLPHENOL	200 U
(57A)	88-75-5	2-NITROPHENOL	400 U
(58A)	100-02-7	4-NITROPHENOL	1000 U
(59A)	51-28-5	2,4-DINITROPHENOL	1000 U
(60A)	534-52-1	4,6-DINITRO-2-METHYLPHENOL	400 U
(64A)	87-86-5	PENTACHLOROPHENOL	200 U
(65A)	108-95-2	PHENOL	200 U
( )	65-85-0	BENZOIC ACID	2000 U
( )	95-48-7	2-METHYLPHENOL	100 U
( )	108-39-4	4-METHYLPHENOL	100 U
( )	95-95-4	2,4,5-TRICHLOROPHENOL	2000 U
(1B)	83-32-9	ACENAPHTHENE	200 U
(5B)	92-87-5	BENZIDINE	800 U
(8B)	120-82-1	1,2,4-TRICHLOROBENZENE	200 U
(9B)	118-74-1	HEXACHLOROBENZENE	200 U
(12B)	67-72-1	HEXACHLOROETHANE	200 U
(18B)	111-44-4	BIS(2-CHLOROETHYL)ETHER	200 U
(20B)	91-58-7	2-CHLORONAPHTHALENE	200 U
(25B)	95-50-1	1,2-DICHLOROBENZENE	200 U
(26B)	541-73-1	1,3-DICHLOROBENZENE	200 U
(27B)	106-46-7	1,4-DICHLOROBENZENE	200 U
(28B)	91-94-1	3,3'-DICHLOROBENZIDINE	400 U
(35B)	121-14-2	2,4-DINITROTOLUENE	400 U
(36B)	606-20-2	2,6-DINITROTOLUENE	400 U
(37B)	122-66-7	1,2-DIPHENYLHYDRAZINE	400 U
(39B)	206-44-0	FLUORANTHENE	200 U
(40B)	7005-72-3	4-CHLOROPHENYL PHENYL ETHER	200 U
(41B)	101-55-3	4-BROMOPHENYL PHENYL ETHER	200 U
(42B)	39638-32-9	BIS(2-CHLOROISOPROPYL) ETHER	400 U
(43B)	111-91-1	BIS(2-CHLOROETHOXY) METHANE	400 U
(52B)	87-68-3	HEXACHLOROBUTADIENE	200 U
(53B)	77-47-4	HEXACHLOROCYCLOPENTADIENE	200 U
(54B)	78-59-1	ISOPHORONE	200 U

000128

SAMPLE NUMBER: H1607

SEMIVOLATILE ORGANIC ANALYSIS DATA SHEET CONTINUED

DATAFILE EU06022C12

PP#	CAS #	COMPOUND	UG/L
(55B)	91-20-3	NAPHTHALENE	200 U
(56B)	98-95-3	NITROBENZENE	200 U
(62B)	86-30-6	N-NITROSODIPHENYLAMINE	200 U
(63B)	621-64-7	N-NITROSODIPROPYLAMINE	200 U
(66B)	117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	200 U
(67B)	85-68-7	BENZYL BUTYL PHTHALATE	200 U
(68B)	84-74-2	DI-N-BUTYL PHTHALATE	200 K
(69B)	117-84-0	DI-N-OCTYL PHTHALATE	200 U
(70B)	84-66-2	DIETHYL PHTHALATE	200 U
(71B)	131-11-3	DIMETHYL PHTHALATE	200 U
(72B)	56-55-3	BENZO(A)ANTHRACENE	200 U
(73B)	50-32-8	BENZO(A)PYRENE	400 U
(74B)	205-99-2	BENZO(B)FLUORANTHENE	400 U
(75B)	207-08-9	BENZO(K)FLUORANTHENE	400 U
(76B)	218-01-9	CHRYSENE	400 U
(77B)	208-96-8	ACENAPHTHYLENE	200 U
(78B)	120-12-7	ANTHRACENE	200 U
(79B)	191-24-2	BENZO(GHI)PERYLENE	400 U
(80B)	86-73-7	FLUORENE	200 U
(81B)	85-01-8	PHENANTHRENE	200 U
(82B)	53-70-3	DIBENZO(A,H)ANTHRACENE	400 U
(83B)	193-39-5	INDENO(1,2,3-CD)PYRENE	400 U
(84B)	129-00-0	PYRENE	200 U
( )	62-53-3	ANILINE	200 U
( )	100-51-6	BENZYL ALCOHOL	400 U
( )	106-47-8	4-CHLOROANILINE	1000 U
( )	132-64-9	DIBENZOFURAN	200 U
( )	91-57-6	2-METHYLNAPHTHALENE	400 U
( )	88-74-4	2-NITROANILINE	2000 U
( )	99-09-2	3-NITROANILINE	2000 U
( )	100-01-6	4-NITROANILINE	2000 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
K = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
B = AMOUNT IN BLANK IS GREATER THAN 1/2 THE AMOUNT DETECTED
C = AMOUNT HAS BEEN CORRECTED FOR THE AMOUNT IN THE BLANK

SAMPLE NUMBER: H1607

ORGANICS ANALYSIS DATA SHEET (PAGE 2)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 840602212
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: MKF

CASE NO.: 2903
QC REPORT NO.: 70
CONTRACT NO.: 68-01-6728
DATE SAMPLE RECEIVED: 6/15/84

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 06/21/84
DATE ANALYZED: 06/21/84
PERCENT MOISTURE:

PP#	CAS #	COMPOUND	UG/L
(2V)	107-02-8	ACROLEIN	100 U
(3V)	107-13-1	ACRYLONITRILE	100 U
(4V)	71-43-2	BENZENE	5 U
(6V)	56-23-5	CARBON TETRACHLORIDE	5 U
(7V)	108-90-7	CHLOROBENZENE	5 U
(10V)	107-06-2	1,2-DICHLOROETHANE	1 U
(11V)	71-55-6	1,1,1-TRICHLOROETHANE	5 U
(13V)	75-34-3	1,1-DICHLOROETHANE	5 U
(14V)	79-00-5	1,1,2-TRICHLOROETHANE	5 U
(15V)	79-34-5	1,1,2,2-TETRACHLOROETHANE	10 U
(16V)	75-00-3	CHLOROETHANE	10 U
(19V)	110-75-8	2-CHLOROETHYLVINYL ETHER	10 U
(23V)	67-66-3	CHLOROFORM	5 U
(29V)	75-35-4	1,1-DICHLOROETHENE	5 U
(30V)	156-60-5	TRANS-1,2-DICHLOROETHENE	5 U
(32V)	78-87-5	1,2-DICHLOROPROPANE	10 U
(33V)	10061-02-6	TRANS-1,3-DICHLOROPROPENE	5 U
( )	10061-01-5	CIS-1,3-DICHLOROPROPENE	5 U
(38V)	100-41-4	ETHYLBENZENE	5 U
(44V)	75-09-2	METHYLENE CHLORIDE	10 ~~15~~ C MKF
(45V)	74-87-3	CHLOROMETHANE	10 U
(46V)	74-83-9	BROMOMETHANE	10 U
(47V)	75-25-2	BROMOFORM	10 U
(48V)	75-27-4	BROMODICHLOROMETHANE	5 U
(49V)	75-69-4	FLUOROTRICHLOROMETHANE	5 U
(50V)	75-71-8	DICHLORODIFLUOROMETHANE	5 U
(51V)	124-48-1	CHLORODIBROMOMETHANE	5 U
(85V)	127-18-4	TETRACHLOROETHENE	5 U
(86V)	108-88-3	TOLUENE	5 U
(87V)	79-01-6	TRICHLOROETHENE	5 U
(88V)	75-01-4	VINYL CHLORIDE	10 U
( )	67-64-1	ACETONE	5 U
( )	78-93-3	2-BUTANONE	5 U
( )	75-15-0	CARBONDISULFIDE	1 U
( )	519-78-6	2-HEXANONE	5 U
( )	108-10-1	4-METHYL-2-PENTANONE	5 U
( )	100-42-5	STYRENE	5 U
( )	108-05-4	VINYL ACETATE	5 U
( )	1330-20-7	TOTAL XYLENES	5 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
K = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
B = AMOUNT IN BLANK IS GREATER THAN 1/2 THE AMOUNT DETECTED

000130

SPECTRIX DC # 290_ _-8

Sample Number
H1607
LOW LEVEL WATER

ORGANICS ANALYSIS DATA SHEET - Page 3

FORM II

Laboratory Name: SPECTRIX CORPORATION

Lab Sample I.D. No: 8406022

Date Received: 6/15/84

Date Extracted: 6/20/84

Doc. Control No: 2903-8 -08

Case No: 2903

QC Report No: 70

Date Analyzed: 6/26/84

PESTICIDES

Factor: Conc. 100 Dil.

MULTIPLY ALL VALUES AND DETECTION LIMITS BY .01

PP #	CAS #		ug/l	PP #	CAS #		ug/l
(89P)	309-00-2	aldrin	10 U	(102P)	319-84-6	BHC-Alpha	10 U
(90P)	60-57-1	dieldrin	10 U	(103P)	319-85-7	BHC-Beta	10 U
(91P)	57-74-9	chlordane	10 U	(104P)	319-86-8	BHC-Delta	10 U
(92P)	50-29-3	4,4'-DDT	10 U	(105P)	58-89-9	BHC-Gamma	10 U
(93P)	72-55-9	4,4'-DDE	10 U	(106P)	53469-21-9	PCB-1242	200 U
(94P)	72-54-8	4,4'-DDD	10 U	(107P)	11097-69-7	PCB-1254	200 U
(95P)	115-29-7	endosulfan I	10 U	(108P)	11104-28-2	PCB-1221	200 U
(96P)	115-29-7	endosulfan II	10 U	(109P)	11141-16-5	PCB-1232	200 U
(97P)	1031-07-8	endosulfan sulfate	10 U	(110P)	12672-29-6	PCB-1248	200 U
(98P)	78-20-8	endrin	10 U	(111P)	11096-82-5	PCB-1260	200 U
(99P)	7421-43-4	endrin aldehyde	10 U	(112P)	12674-11-2	PCB-1016	200 U
(100P)	76-44-8	heptachlor	10 U	(113P)	8001-35-2	toxaphene	200 U
(101P)	1024-57-3	heptachlor epoxide	10 U				

FACTOR: $\frac{5}{500}$ [V_F(mL)]x $\frac{1}{}$ [D.F.] = .01

MKF

V_F = Final volume of extract

D.F. = Dilution factor

V_I = Initial weight of sample extracted

DIOXINS

MULTIPLY ALL VALUES AND DETECTION LIMITS BY _____

Date Analyzed: _____

Factor: Conc._____ Dil.___

PP #	CAS #		ug/l
(129B)	1747-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	5 U

FACTOR: _____ [V_F(mL)]x _____ [D.F.] =

[V_I(mL)]

V_F = Final volume of extract

D.F. = Dilution factor

V_I = Initial weight of sample extracted

DATA REPORTING QUALIFIERS

Value - If the result is a value greater than or equal to the detection limit, report the value.

U - Indicates compound was analyzed for but not detected. The number is the minimum detection limit.

E - Actual value, within the limitations of this method, is less than the value given. The mass spectral data indicates the presence of a compound that meets the identification criteria but the quantitative result is less than the specified detection limit but greater than zero.

** - This flag applies to pesticides parameters where the identification has been performed using two column confirmation (as specified in Method 608) but the level is too low for verification of the compound by mass spectrometry.

B - Compound not detected: blank value for the compound was greater than 1/2 of the MDL and greater than 1/2 of the concentration detected in sample.

000131

.2 SITE INSPECTION REPORT

DATE OF INSPECTION:	June 12, 13, 14, 1984
FACILITY:	Columbine Landfill
EPA ID #:	COD980635379
LOCATION:	The facility is at the intersection of Weld County Roads 5 and 6, about 9 miles nor n of I-25 and 120th Ave., Denver, Colorado. (See attached map)
CONTACT:	Steve Orzynski, Director Technical Services (303) 450-2755 or 2756, Kierns Corporation 1333 West 120th, Suite 210 Northglenn, Colorado 80234
INSPECTORS:	Scott Winters, Team Leader Dennis Hotovec, Team Member Mark Mullis, Team Member (E&E)
WEATHER CONDITIONS:	June 12, 1984 Partly Cloudy, 75°F to 80°F June 13, 1984 Clear, 75°F changed cloudy; rain 65°F June 14, 1984 Clear, Muggy, 75°F to 80°F
TIME IN:	June 12, 1984: 1310 June 13, 1984: 0830 June 14, 1984: 0900
TIME OUT:	June 12, 1984: 1700 June 13, 1984: 1900 June 14, 1984: 1324

Site History: This facility is an active landfill which began operations around 1965 and was originally owned by Mr. Kenneth Pratt (303) 776-6822. This operation occupied about 25 acres of land and accepted 84,000 gallons of chemical wastes from IBM from 1965 to 1969. These wastes included solvents and unspecified organics, inorganics, acids and bases. The old operation was shut down in 1970.

In 1980 the Kiernes Corporation aquired about 170 acres of land west of the old "Pratt Property". The company applied for and received a Certificate of Designation from the Weld County Commissioners, with the appropriate recommendation for approval for the Colorado Department of Health. In 1983 the present company requested an expansion of their operational area to include the old property. Currently this landfill operation occupies a total of 195 acres of land.

Beneath this active landf is the old Columbine Coal Min hich is now inactive. This mine area ... classified by the Colorado Geological Survey as having a high hazard potential for subsidence. Above and below the mine area are three saturated intervals that have been identified by the facility's consultants. The first interval is near surface, at a depth of about 25 to 30 feet and is reported to be a very thin saturated interval which is confined to the drainages in which this system exists. On site are no indications of any surface expression for this saturated interval. Directly beneath this aquifer, at a depth of about 40 to 60 feet is a second perched ground water system. Both shallow systems have been reported as probably discharging into Coal Creek or the associated alluvium. Beneath the entire site at a depth of 400 to 450 feet is the Laramie Fox Hills Aquifer. The potentiometric surface th aquifer a pro imately 20 feet below land surface which indicates that the aquifer is under artesian conditions.

This facility is located in an upland area characterized by gently sloping topography with a maximum slope of about 10 percent. Topographic relief for this area is about 80 feet with three surface water runoff containment ponds located onsite. About 1/2 mile west of this property are two dry stock watering ponds which were constructed across the principal drainage, discharging offsite. All 5 ponds are about 15 feet deep and are about 100 x 100 feet in extent.

The existing landuse around this site is principally agricultural. About 1 1/2 miles northwest of this site is the town of Erie. The present population for this town is about 2,300 with approximately 10 people residing within 1 mile of the site. All of these residences are located upgradient from the site. Therefore, the principal population at risk for this area is the town of Erie. Because the original wastes were disposed of below ground surface by several layers of municipal wastes the principal pathway for human exposure would be either groundwater or surface water.

From review of the water wells registered with the State Engineers Office, within a 1 mile radius of this site two principal sources of ground waters are used by the residents in this area. These sources of water are the Coal Creek Alluvium and the Laramie-Fox Aquifer. These wells have been registered for domestic and livestock uses and are about 35 feet deep in the alluvium and 700 feet deep into the Laramie-Fox Hills Aquifer.

On June 12, 1984, the inspectors met Mr. Steve Orzynski, (Director of Technical Services for Colorado Landfill System Inc,) on site to take a tour of the facility, locate and establish the depths of all monitoring wells and to inspect the surface water runoff containment ponds located on site. Further, the inspectors were onsite to evacuate the monitoring wells prior to sampling the next day. It was discovered that are six test holes actually used as monitoring wells, located on site. Of these six holes only three contained water of sufficient quantity that could be collected for groundwater sampling purposes. All three ponds located on site contained sufficient water to be sampled the next day.

On June 13 the inspectors returned to this facility and began sampling. Test holes one, eight and six were sampled as well as two of the three surface water ponds located onsite.

No waters were contained within the offsite ponds at the time of inspection and they could not be sampled. All surface water samples were collected by using a stainless steel clamp attached to a 4 foot metal rod and clamping the individual bottles in this device. Once the bottles were secured they were lowered, inverted, into the surface water until the desired sampling depth was reached. At that time they were turned over and allowed to fill. Once filling was completed they were removed and capped for shipment. All soil samples collected at this facility were obtained by using a decontaminated plastic scoop.

All groundwater samples were collected using a stainless steel bailer with a dedicated rope for each monitoring well. After the samples were collected, in a stainless steel bucket they were poured into either a sample bottle or into a barrel filter for collection of the inorganic samples. These samples were then filtered using a 45 micron filter. The samples were then placed into the sample bottles and acidified using nitric acid. (Note: Groundwater wells used were probably not constructed with low level organic chemical sampling in mind.)

The equipment was then decontaminated using a tap water rinse and scrubbing brush, then a triple rinse in acetone, air dried and then a triple deionized water rinse before reuse. The rope and all waste material was disposed of at the site in plastic bags.

Groundwater sample number 1 located along the east boundary of the entire site, including the old Pratt Property. This sample was at a depth of about 90 feet and was collected as a composite grab sample. The pH and conductivity for these samples were 6.8 at a tempertature 26°C and 10250 umhos/cm respectively.

Test hole number 8 was the location for groundwater sample number 2. The water level for this hole was approximately 24 feet. Again a composite grab sample was collected from this location and a pH and conductivity were obtained from this sample. The pH was 6.9 at a temperature of 22°C and the conductivity was 8600 umhos/cm. This sample was very turbid due to the method employed in obtaining the necessary samples. The method used was to drop the bailer down hole continuously and splash the liquid into the bailer until the necessary amount of sample was collected.

A groundwater blank was submitted to the laboratories assigned this facility. The organic samples were prepared using organic free water-obtained from Fisher Scientific, Lot number 732033. The conductivity for this sample ranged between 6.4 & 7.8 at a temperature of 22°C and had a conductivity of 5.4 umhos/cm. The inorganic sample was prepared using deionized water obtained from the Colorado Department of Health's Laboratory Division. No pH or conductivity was obtained for this sample because of acidification of the sample before the analysis could be conducted.

Surface water sample number 1 was collected from the designated leachate collection pond located at the bottom the major drainage which is used for disposal of the municipal wastes. Although this pond is about 55 feet in depth only 2 to 3 feet of liquid was contained within the pond. This 2 to 3 feet of liquids was about 15 x 30 feet in areal extent.

The sample was collected a depth of about 6 to 8 inches. After collection of this sample a pH and co tivity reading were taken wit e following results. The pH of this sample was 8.1 at a temperature of 23°C and the conductivity was 2400 umhos/cm.

Surface water sample number 2 is a pond designated as a surface water runoff control pond. This pond is the north runoff control containment area and the sample was collected on the south side of this pond. The sample was collected at a depth of about 6 inches. Again pH and conductivity readings were obtained for this sample. The pH at 22°C was 8.9 and the conductivity was 1250 umhos/cm.

On June 14, 1984, the inspectors again arrived on site and proceeded to the remaining test hole which was scheduled for sampling. This hole, test hole 6, was about 60 feet deep with the water level at 33 1/2 feet. Because this hole had been bailed 2 days previously it was decided that the inspectors would need to evacuate this casing again to insure a valid groundwater sample. After this test hole had been bailed and allowed to recover groundwater sample number 3 and 30 (a duplicate sample of number 3) were collected. These samples were collected at an approximate depth of 45 to 50 feet and were composite grab samples. For both of these samples the pH was 6.7 at a temperature of 24°C and a conductivity of 17250 umhos/cm.

All samples collected at this facility were split with the current owners/operators of this operation and were specifically given to Mr. Orzynski. The groundwater samples were pressure filtered using nitrogen gas and a 45 micron filter paper contained within a barrel filter. The surface water samples were not filtered.

After samples were collected they were placed into plastic bottles, acidified, labeled, taped, tagged, bagged and placed into coolers containing ice. These samples were then sent via Federal Express, using the appropriate chain of custody procedures, to the assigned laboratories. The inorganic samples were sent to Cambridge Analytical Associates located at 222 Arsenal Street in Watertown, Mass. The organic analyses were performed by Spectrix Corporation located at 3911 Fondren, Suite 100, in Houston, TX. All samples were sent to the laboratories on June 14, 1984.

On September 17, 1984, the Colorado Department of Health received the laboratory data for the organic analyses. Below are the reported values for the organic constitutents detected in the samples submitted.

Organics (Surface Water)
ug/l

	SW-1	SW-2
Bis (2-Ethythexyl) Phthalate	1200	
Chloroform	9	No constituants present Above established detection limits.
Methylene Chloride	5**	

(Note: ** indicates amount has been corrected for the amount detected in the sample blank.)

Organics (Groundwater)
ug/l

Groundwater Flow

	GW-1	GW-3 and	30
Bis (2-Ethythexyl)Phthalate	0	25	0
Acetone	210	0	0
Dieldrin	10*	0	0
Heptachlor	10*	0	0
BHC-Gamma	14.1	0	0
Chloroform	0	15	200**
Oxybismethane	310	0	0
1,2-Propandiol, 3,3 - Oxydi, Tetranitrate	90	0	0
1-Butene	130	0	0
Dimethoxy Methane	33	0	0
Methylene Chloride	0	6**	10**
Specific Conductivity	10250 umhos/cm	17250 umhos/cm	17250 umhos/cm

Groundwater Flow

	GW-2	GW-B
Oxybis methane	370	0
Dimethoxy Methane	37	0
Tetrahydrofuran	41	0
Chloroform	0	39
Methylene Chloride	0	6**
Specific Conductivity	8600 umhos/cm	5.4 umhos/cm

(Note: 1) * indicates compound present but below detection limit.
2) ** indicates value has been corrected for amount found in laboratory blank.)

From review of this analytical data it is the inspectors opinion that several organic compounds detected were due to field sampling and laboratory errors. The specific compounds were;

1. Acetone - this compound is present due to the use of acetone during the field sampling/decontamination procedures. Acetone was used as a final "rinse" to help clean the stainless steel sample containers prior to sample collection.

2. Chloroform and Methylene chloride - these compounds were not only detected in the field samples collected but were also present in the laboratory blank. Because these compounds were detected in the laboratory blank and are commonly found in the laboratory it is assumed that these constituents were present due to laboratory error.

and Gamma BHC. These pesticides have been banned from use for several years. Based upon their presence in the old fill area and not down gradient in the new fill it is the inspectors opinion that these materials were used during the old landfilling operation for vector/pest control. Specifically BHC Gamma was used for cattle dips, fly and maggot control and for household use on lawns, gardens and rose beds.

Tetrahydrofuran and Bis (2-Ethylhexyl) Phthalate were detected in groundwater samples. These constituents are probably a result of degradation of plastic products and the release of these products from the PVC pipe and glue used in the construction of the monitoring wells. Further, Bis (2-ethylexal) Phthalate was found in one surface water sample which again could be due to plastic degradation and transported to the pond via onsite surface water precipitation runoff.

The last four constituents were tentatively identified compounds and are not necessarily correctly identified. These compounds are;

1. 1,2 - Propandiol 3,3, - Oxydi, Tetranitrate is an exotic compounds which is probably not found in typical municipal landfills. From conversations with the Colorado Department of Health laboratory personnel it was discovered that the GC/MS scan for this compound is so difficult to interpret that several other compound could be readily substituted, particularily if the match was made using a computer. Therefore, the inspectors decided that this information could not be considered as appropriate information for evalution of this site.

2. Methane, Dimethoxy (Formal, Methylal) is reportedly used in perfumes and artifical resins. This compound is made from methonal and formaldehyde and is highly soluble in water. It is possible that the constituent tentatively identified may not be the one present.

3. 1-Butene is used as a polymer and alkylate gasoline which is obtained from the distillation of refinery gases. This compound could be from the disposal of old gasoline products or because the compound is again tentatively identified the reliability of this identification procedure is questionable. Therefore, the inspectors do not feel that this data should be strictly considered in any folowup work. However, the data does indicate the presence of organic compounds whic should be considered if further work is done at the facility.

4. Oxybis Methane is a volitle material which is probably due to the operation of this landfill. This material was used in spray cans as a propellent, a refridgerent, solvent, catalyst and a stablizer for potymerization of plastics. Therefore, even though this constituent was only tentatively identified it is the inspectors opinion that the presence of this compound is probable for this location.

Based upon the field cond vty data it is the inspectors inion that the landfill is producing lea te, specifically from data obt ed from test holes 1 and 6. Further, because both test holes indicate high specific conductivity it is likely that some mounding may be occurring thus allowing leachate to migrate offsite, upgradient. Once the inorganic analysis is received the soluble ionic constituents may help identify the compounds responsible for this high conductivity. However, if this data doesn't provide the necessary information it is the inspectors opinion that the inorganic parameters list should be expanded to include anions to help identify the problem constituents.

Based upon these facts it is the inspectors opinion that further followup work is needed at this site to accurately determine the presence of the organic constituents identified at this site. Further, the followup program should be designed to confirm the source of these compounds, the rate(s) and flow direction of any contaminant migration and provide an accurate determination of the potential for human exposure via surface and groundwater migration, the principal pathways of exposure, specifically to the alluvial aquifer associated with Coal Creek.

3012 SITE INSPECTION REPORT

DATE OF INSPECTION: June 12, 13, 14, 1984

FACILITY: Columbine Landfill

EPA ID #: COD980635379

LOCATION: The facility is at the intersection of Weld County [illegible] Ave., Denver, Colorado. (See attached map)

CONTACT: Steve Orzynski, Director Technical Services
(303) 450-2755 or 2756, Kierns Corporation
1333 West 120th, Suite 210
Northglenn, Colorado 80234

INSPECTORS: Scott Winters, Team Leader
Dennis Hotovec, Team Member
Mark Mullis, Team Member (E&E)

WEATHER CONDITIONS: June 12, 1984 Partly Cloudy, 75°F to 80°F
June 13, 1984 Clear, 75°F changed cloudy; rain 65°F
June 14, 1984 Clear, Muggy, 75°F to 80°F

TIME IN: June 12, 1984: 1310
June 13, 1984: 0830
June 14, 1984: 0900

TIME OUT: June 12, 1984: 1700
June 13, 1984: 1900
June 14, 1984: 1324

Site History: This facility is an active landfill which began operations around 1965 and was originally owned by Mr. Kenneth Pratt (303) 776-6822. This operation occupied about 25 acres of land and accepted 84,000 gallons of chemical wastes from IBM from 1965 to 1969. These wastes included solvents and unspecified organics, inorganics, acids and bases. The old operation was shut down in 1970.

In 1980 the Kiernes Corporation aquired about 170 acres of land west of the old "Pratt Property". The company applied for and received a Certificate of Designation from the Weld County Commissioners, with the appropriate recommendation for approval for the Colorado Department of Health. In 1983 the present company requested an expansion of their operational area to include the old property. Currently this landfill operation occupies a total of 195 acres of land.

Beneath this active landfill is the old Columbine Coal Mine which is now inactive. This mine area is classified by the Colorado Geological Survey as having a high hazard potential for subsidence. Above and below the mine area are three saturated intervals that have been identified by the facility's consultants. The first interval is near surface, at a depth of about 25 to 30 feet and is reported to be a very thin saturated interval which is confined to the drainages in which this system exists. On site are no indications of any surface expression for this saturated interval. Directly beneath this aquifer, at a depth of about 40 to 60 feet is a second perched ground water system. Both shallow systems have been reported as probably discharging into Coal Creek or the associated alluvium. Beneath the entire site at a depth of 400 to 450 feet is the Laramie Fox Hills Aquifer. The potentiometric surface for this aquifer is approximately 200 to 270 feet [illegible] which indicates that the aquifer is under artesian conditions.

This facility is located in an upland area characterized by gently sloping topography with a maximum slope of about 10 percent. Topographic relief for this area is about 80 feet with three surface water runoff containment ponds located onsite. About 1/2 mile west of this property are two dry stock watering ponds which were constructed across the principal drainage, discharging offsite. All 5 ponds are about 15 feet deep and are about 100 x 100 feet in extent.

The existing landuse around this site is principally agricultural. About 1 1/2 miles northwest of this site is the town of Erie. The present population for this town is about 2,300 with approximately 10 people residing within 1 mile of the site. All of these residences are located upgradient from the site. Therefore, the principal population at risk for this area is the town of Erie. Because the original wastes were disposed of below ground surface by several layers of municipal wastes the principal pathway for human exposure would be either groundwater or surface water.

From review of the water wells registered with the State Engineers Office, within a 1 mile radius of this site two principal sources of ground waters are used by the residents in this area. These sources of water are the Coal Creek Alluvium and the Laramie-Fox Aquifer. These wells have been registered for domestic and livestock uses and are about 35 feet deep in the alluvium and 700 feet deep into the Laramie-Fox Hills Aquifer.

On June 12, 1984, the inspectors met Mr. Steve Orzynski, (Director of Technical Services for Colorado Landfill System Inc,) on site to take a tour of the facility, locate and establish the depths of all monitoring wells and to inspect the surface water runoff containment ponds located on site. Further, the inspectors were onsite to evacuate the monitoring wells prior to sampling the next day. It was discovered that are six test holes actually used as monitoring wells, located on site. Of these six holes only three contained water of sufficient quantity that could be collected for groundwater sampling purposes. All three ponds located on site contained sufficient water to be sampled the next day.

On June 13 the inspector returned to this facility and began sampling. Test holes one, eight and six were sampled as well as two of the three surface water ponds located onsite.

No waters were contained within the offsite ponds at the time of inspection and they could not be sampled. All surface water samples were collected by using a stainless steel clamp attached to a 4 foot metal rod and clamping the individual bottles in this device. Once the bottles were secured they were lowered, inverted, into the surface water until the desired sampling depth was reached. At that time they were turned over and allowed to fill. Once filling was completed they were removed and capped for shipment. All soil samples collected at this facility were obtained by using a decontaminated plastic scoop.

All groundwater samples were collected using a stainless steel bailer with a dedicated rope for each monitoring well. After the samples were collected, in a stainless steel bucket they were poured into either a sample bottle or into a barrel filter for collection of the inorganic samples. These samples were then filtered using a 45 micron filter. The samples were then placed into the sample bottles and acidified using nitric acid. (Note: Groundwater wells used were probably not constructed with low level organic chemical sampling in mind.)

The equipment was then decontaminated using a tap water rinse and scrubbing brush, then a triple rinse in acetone, air dried and then a triple deionized water rinse before reuse. The rope and all waste material was disposed of at the site in plastic bags.

Groundwater sample number 1 located along the east boundary of the entire site, including the old Pratt Property. This sample was at a depth of about 90 feet and was collected as a composite grab sample. The pH and conductivity for these samples were 6.8 at a tempertature 26°C and 10250 umhos/cm respectively.

Test hole number 8 was the location for groundwater sample number 2. The water level for this hole was approximately 24 feet. Again a composite grab sample was collected from this location and a pH and conductivity were obtained from this sample. The pH was 6.9 at a temperature of 22°C and the conductivity was 8600 umhos/cm. This sample was very turbid due to the method employed in obtaining the necessary samples. The method used was to drop the bailer down hole continuously and splash the liquid into the bailer until the necessary amount of sample was collected.

A groundwater blank was submitted to the laboratories assigned this facility. The organic samples were prepared using organic free water-obtained from Fisher Scientific, Lot number 732033. The conductivity for this sample ranged between 6.4 & 7.8 at a temperature of 22°C and had a conductivity of 5.4 umhos/cm. The inorganic sample was prepared using deionized water obtained from the Colorado Department of Health's Laboratory Division. No pH or conductivity was obtained for this sample because of acidification of the sample before the analysis could be conducted.

Surface water sample number 1 was collected from the designated leachate collection pond located at the bottom the major drainage which is used for disposal of the municipal wastes. Although this pond is about 55 feet in depth only 2 to 3 feet of liquid was contained within the pond. This 2 to 3 feet of liquids was about 15 x 30 feet in areal extent.

The sample was collected a depth of about 6 to 8 inches After collection of this sample a pH and luctivity reading were taken w the following results. The pH of this sample was 8.1 at a temperature of 23°C and the conductivity was 2400 umhos/cm.

Surface water sample number 2 is a pond designated as a surface water runoff control pond. This pond is the north runoff control containment area and the sample was collected on the south side of this pond. The sample was collected at a depth of about 6 inches. Again pH and conductivity readings were obtained for this sample. The pH at 22°C was 8.9 and the conductivity was 1250 umhos/cm.

On June 14, 1984, the inspectors again arrived on site and proceeded to the remaining test hole which was scheduled for sampling. This hole, test hole 6, was about 60 feet deep with the water level at 33 1/2 feet. Because this hole had been bailed 2 days previously it was decided that the inspectors would need to evacuate this casing again to insure a valid groundwater sample. After this test hole had been bailed and allowed to recover groundwater sample number 3 and 30 (a duplicate sample of number 3) were collected. These samples were collected at an approximate depth of 45 to 50 feet and were composite grab samples. For both of these samples the pH was 6.7 at a temperature of 24°C and a conductivity of 17250 umhos/cm.

All samples collected at this facility were split with the current owners/operators of this operation and were specifically given to Mr. Orzynski. The groundwater samples were pressure filtered using nitrogen gas and a 45 micron filter paper contained within a barrel filter. The surface water samples were not filtered.

After samples were collected they were placed into plastic bottles, acidified, labeled, taped, tagged, bagged and placed into coolers containing ice. These samples were then sent via Federal Express, using the appropriate chain of custody procedures, to the assigned laboratories. The inorganic samples were sent to Cambridge Analytical Associates located at 222 Arsenal Street in Watertown, Mass. The organic analyses were performed by Spectrix Corporation located at 3911 Fondren, Suite 100, in Houston, TX. All samples were sent to the laboratories on June 14, 1984.

On September 17, 1984, the Colorado Department of Health received the laboratory data for the organic analyses. Below are the reported values for the organic constitutents detected in the samples submitted.

Organics (Surface Water)
ug/l

	SW-1	SW-2
Bis (2-Ethythexyl) Phthalate	1200	
Chloroform	9	No constituants present Above
Methylene Chloride	5**	established detection limits.

(Note: ** indicates amount has been corrected for the amount detected in the sample blank.)

Organics (Groundwater)
ug/l

Groundwater Flow

	GW-1	GW-3 and	30
Bis (2-Ethythexyl)Phthalate	0	25	0
Acetone	210	0	0
Dieldrin	10*	0	0
Heptachlor	10*	0	0
BHC-Gamma	14.1	0	0
Chloroform	0	15	200**
Oxybismethane	310	0	0
1,2-Propandiol, 3,3 - Oxydi, Tetranitrate	90	0	0
1-Butene	130	0	0
Dimethoxy Methane	33	0	0
Methylene Chloride	0	6**	10**
Specific Conductivity	10250 umhos/cm	17250 umhos/cm	17250 umhos/cm

Groundwater Flow

	GW-2	GW-B
Oxybis methane	370	0
Dimethoxy Methane	37	0
Tetrahydrofuran	41	0
Chloroform	0	39
Methylene Chloride	0	6**
Specific Conductivity	8600 umhos/cm	5.4 umhos/cm

(Note: 1) * indicates compound present but below detection limit.
2) ** indicates value has been corrected for amount found in laboratory blank.)

From review of this analytical data it is the inspectors opinion that several organic compounds detected were due to field sampling and laboratory errors. The specific compounds were;

1. Acetone - this compound is present due to the use of acetone during the field sampling/decontamination procedures. Acetone was used as a final "rinse" to help clean the stainless steel sample containers prior to sample collection.

2. Chloroform and Methylene chloride - these compounds were not only detected in the field samples collected but were also present in the laboratory blank. Because these compounds were detected in the laboratory blank and are commonly found in the laboratory it is assumed that these constituents were present due to laboratory error.

and Gamma BHC. These pe cides have been banned from us or several years. Based upon their presenc ar the old fill area and not gradient in the new fill it is the inspectors opinion that these materials were used during the old landfilling operation for vector/pest control. Specifically BHC Gamma was used for cattle dips, fly and maggot control and for household use on lawns, gardens and rose beds.

Tetrahydrofuran and Bis (2-Ethylhexyl) Phthalate were detected in groundwater samples. These constituents are probably a result of degradation of plastic products and the release of these products from the PVC pipe and glue used in the construction of the monitoring wells. Further, Bis (2-ethylexal) Phthalate was found in one surface water sample which again could be due to plastic degradation and transported to the pond via onsite surface water precipitation runoff.

The last four constituents were tentatively identified compounds and are not necessarily correctly identified. These compounds are;

1. 1,2 - Propandiol 3,3, - Oxydi, Tetranitrate is an exotic compounds which is probably not found in typical municipal landfills. From conversations with the Colorado Department of Health laboratory personnel it was discovered that the GC/MS scan for this compound is so difficult to interpret that several other compound could be readily substituted, particularily if the match was made using a computer. Therefore, the inspectors decided that this information could not be considered as appropriate information for evalution of this site.

2. Methane, Dimethoxy (Formal, Methylal) is reportedly used in perfumes and artifical resins. This compound is made from methonal and formaldehyde and is highly soluble in water. It is possible that the constituent tentatively identified may not be the one present.

3. 1-Butene is used as a polymer and alkylate gasoline which is obtained from the distillation of refinery gases. This compound could be from the disposal of old gasoline products or because the compound is again tentatively identified the reliability of this identification procedure is questionable. Therefore, the inspectors do not feel that this data should be strictly considered in any folowup work. However, the data does indicate the presence of organic compounds whic should be considered if further work is done at the facility.

4. Oxybis Methane is a volitle material which is probably due to the operation of this landfill. This material was used in spray cans as a propellent, a refridgerent, solvent, catalyst and a stablizer for potymerization of plastics. Therefore, even though this constituent was only tentatively identified it is the inspectors opinion that the presence of this compound is probable for this location.

Based upon the field co tivty data it is the inspecto pinion that the landfill is producing le..ate, specifically from data ob ined from test holes 1 and 6. Further, because both test holes indicate high specific conductivity it is likely that some mounding may be occurring thus allowing leachate to migrate offsite, upgradient. Once the inorganic analysis is received the soluble ionic constituents may help identify the compounds responsible for this high conductivity. However, if this data doesn't provide the necessary information it is the inspectors opinion that the inorganic parameters list should be expanded to include anions to help identify the problem constituents.

Based upon these facts it is the inspectors opinion that further followup work is needed at this site to accurately determine the presence of the organic constituents identified at this site. Further, the followup program should be designed to confirm the source of these compounds, the rate(s) and flow direction of any contaminant migration and provide an accurate determination of the potential for human exposure via surface and groundwater migration, the principal pathways of exposure, specifically to the alluvial aquifer associated with Coal Creek.

30.2 SITE INSPECTION REPORT PA/E WLD/COL

DATE OF INSPECTION:	June 12, 13, 14, 1984
FACILITY:	Columbine Landfill
EPA ID #:	COD980635379
LOCATION:	The facility is at the intersection of Weld County Roads 5 and 6, about 9 miles north of I-25 and 120th Ave., Denver, Colorado. (See attached map)
CONTACT:	Steve Orzynski, Director Technical Services (303) 450-2755 or 2756, Kierns Corporation 1333 West 120th, Suite 210 Northglenn, Colorado 80234
INSPECTORS:	Scott Winters, Team Leader Dennis Hotovec, Team Member Mark Mullis, Team Member (E&E)
WEATHER CONDITIONS:	June 12, 1984 Partly Cloudy, 75°F to 80°F June 13, 1984 Clear, 75°F changed cloudy; rain 65°F June 14, 1984 Clear, Muggy, 75°F to 80°F
TIME IN:	June 12, 1984: 1310 June 13, 1984: 0830 June 14, 1984: 0900
TIME OUT:	June 12, 1984: 1700 June 13, 1984: 1900 June 14, 1984: 1324

Site History: This facility is an active landfill which began operations around 1965 and was originally owned by Mr. Kenneth Pratt (303) 776-6822. This operation occupied about 25 acres of land and accepted 84,000 gallons of chemical wastes from IBM from 1965 to 1969. These wastes included solvents and unspecified organics, inorganics, acids and bases. The old operation was shut down in 1970.

In 1980 the Kiernes Corporation aquired about 170 acres of land west of the old "Pratt Property". The company applied for and received a Certificate of Designation from the Weld County Commissioners, with the appropriate recommendation for approval for the Colorado Department of Health. In 1983 the present company requested an expansion of their operational area to include the old property. Currently this landfill operation occupies a total of 195 acres of land.

Beneath this active landfill [illegible] the old Columbine Coal Mine [illegible]h is now inactive. This mine area is classified by the Colorado Geolo[illegible]cal Survey as having a high hazard potential for subsidence. Above and below the mine area are three saturated intervals that have been identified by the facility's consultants. The first interval is near surface, at a depth of about 25 to 30 feet and is reported to be a very thin saturated interval which is confined to the drainages in which this system exists. On site are no indications of any surface expression for this saturated interval. Directly beneath this aquifer, at a depth of about 40 to 60 feet is a second perched ground water system. Both shallow systems have been reported as probably discharging into Coal Creek or the associated alluvium. Beneath the entire site at a depth of 400 to 450 feet is the Laramie Fox Hills Aquifer. The potentiometric surface for this aquifer is approximately 200 to 270 feet below land surface which indicates that the aquifer is under artesian conditions.

This facility is located in an upland area characterized by gently sloping topography with a maximum slope of about 10 percent. Topographic relief for this area is about 80 feet with three surface water runoff containment ponds located onsite. About 1/2 mile west of this property are two dry stock watering ponds which were constructed across the principal drainage, discharging offsite. All 5 ponds are about 15 feet deep and are about 100 x 100 feet in extent.

The existing landuse around this site is principally agricultural. About 1 1/2 miles northwest of this site is the town of Erie. The present population for this town is about 2,300 with approximately 10 people residing within 1 mile of the site. All of these residences are located upgradient from the site. Therefore, the principal population at risk for this area is the town of Erie. Because the original wastes were disposed of below ground surface by several layers of municipal wastes the principal pathway for human exposure would be either groundwater or surface water.

From review of the water wells registered with the State Engineers Office, within a 1 mile radius of this site two principal sources of ground waters are used by the residents in this area. These sources of water are the Coal Creek Alluvium and the Laramie-Fox Aquifer. These wells have been registered for domestic and livestock uses and are about 35 feet deep in the alluvium and 700 feet deep into the Laramie-Fox Hills Aquifer.

On June 12, 1984, the inspectors met Mr. Steve Orzynski, (Director of Technical Services for Colorado Landfill System Inc,) on site to take a tour of the facility, locate and establish the depths of all monitoring wells and to inspect the surface water runoff containment ponds located on site. Further, the inspectors were onsite to evacuate the monitoring wells prior to sampling the next day. It was discovered that are six test holes actually used as monitoring wells, located on site. Of these six holes only three contained water of sufficient quantity that could be collected for groundwater sampling purposes. All three ponds located on site contained sufficient water to be sampled the next day.

On June 13 the inspectors re ed to this facility and began pling. Test holes one, eight and six were sampled as well as two of the t e surface water ponds located onsite.

No waters were contained within the offsite ponds at the time of inspection and they could not be sampled. All surface water samples were collected by using a stainless steel clamp attached to a 4 foot metal rod and clamping the individual bottles in this device. Once the bottles were secured they were lowered, inverted, into the surface water until the desired sampling depth was reached. At that time they were turned over and allowed to fill. Once filling was completed they were removed and capped for shipment. All soil samples collected at this facility were obtained by using a decontaminated plastic scoop.

All groundwater samples were collected using a stainless steel bailer with a dedicated rope for each monitoring well. After the samples were collected, in a stainless steel bucket they were poured into either a sample bottle or into a barrel filter for collection of the inorganic samples. These samples were then filtered using a 45 micron filter. The samples were then placed into the sample bottles and acidified using nitric acid. (Note: Groundwater wells used were probably not constructed with low level organic chemical sampling in mind.)

The equipment was then decontaminated using a tap water rinse and scrubbing brush, then a triple rinse in acetone, air dried and then a triple deionized water rinse before reuse. The rope and all waste material was disposed of at the site in plastic bags.

Groundwater sample number 1 located along the east boundary of the entire site, including the old Pratt Property. This sample was at a depth of about 90 feet and was collected as a composite grab sample. The pH and conductivity for these samples were 6.8 at a tempertature 26°C and 10250 umhos/cm respectively.

Test hole number 8 was the location for groundwater sample number 2. The water level for this hole was approximately 24 feet. Again a composite grab sample was collected from this location and a pH and conductivity were obtained from this sample. The pH was 6.9 at a temperature of 22°C and the conductivity was 8600 umhos/cm. This sample was very turbid due to the method employed in obtaining the necessary samples. The method used was to drop the bailer down hole continuously and splash the liquid into the bailer until the necessary amount of sample was collected.

A groundwater blank was submitted to the laboratories assigned this facility. The organic samples were prepared using organic free water-obtained from Fisher Scientific, Lot number 732033. The conductivity for this sample ranged between 6.4 & 7.8 at a temperature of 22°C and had a conductivity of 5.4 umhos/cm. The inorganic sample was prepared using deionized water obtained from the Colorado Department of Health's Laboratory Division. No pH or conductivity was obtained for this sample because of acidification of the sample before the analysis could be conducted.

Surface water sample number 1 was collected from the designated leachate collection pond located at the bottom the major drainage which is used for disposal of the municipal wastes. Although this pond is about 55 feet in depth only 2 to 3 feet of liquid was contained within the pond. This 2 to 3 feet of liquids was about 15 x 30 feet in areal extent.

The sample was collected at epth of about 6 to 8 inches. er collection of this sample a pH and conductivity reading were taken with following results. The pH of this sample was 8.1 at a temperature of 23°C and the conductivity was 2400 umhos/cm.

Surface water sample number 2 is a pond designated as a surface water runoff control pond. This pond is the north runoff control containment area and the sample was collected on the south side of this pond. The sample was collected at a depth of about 6 inches. Again pH and conductivity readings were obtained for this sample. The pH at 22°C was 8.9 and the conductivity was 1250 umhos/cm.

On June 14, 1984, the inspectors again arrived on site and proceeded to the remaining test hole which was scheduled for sampling. This hole, test hole 6, was about 60 feet deep with the water level at 33 1/2 feet. Because this hole had been bailed 2 days previously it was decided that the inspectors would need to evacuate this casing again to insure a valid groundwater sample. After this test hole had been bailed and allowed to recover groundwater sample number 3 and 30 (a duplicate sample of number 3) were collected. These samples were collected at an approximate depth of 45 to 50 feet and were composite grab samples. For both of these samples the pH was 6.7 at a temperature of 24°C and a conductivity of 17250 umhos/cm.

All samples collected at this facility were split with the current owners/operators of this operation and were specifically given to Mr. Orzynski. The groundwater samples were pressure filtered using nitrogen gas and a 45 micron filter paper contained within a barrel filter. The surface water samples were not filtered.

After samples were collected they were placed into plastic bottles, acidified, labeled, taped, tagged, bagged and placed into coolers containing ice. These samples were then sent via Federal Express, using the appropriate chain of custody procedures, to the assigned laboratories. The inorganic samples were sent to Cambridge Analytical Associates located at 222 Arsenal Street in Watertown, Mass. The organic analyses were performed by Spectrix Corporation located at 3911 Fondren, Suite 100, in Houston, TX. All samples were sent to the laboratories on June 14, 1984.

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Organics (Surface Water)
ug/1

	SW-1	SW-2
Bis (2-Ethythexyl) Phthalate	1200	
Chloroform	9	No constituants present Above
Methylene Chloride	5**	established detection limits.

(Note: ** Indicates amount been corrected for the amount etected in the sample blank.)

Organics (Groundwater)
ug/l

Groundwater Flow

	GW-1	GW-3 and	30
Bis (2-Ethythexyl)Phthalate	0	25	0
Acetone	210	0	0
Dieldrin	10*	0	0
Heptachlor	10*	0	0
BHC-Gamma	14.1	0	0
Chloroform	0	15	200**
Oxybismethane	310	0	0
1,2-Propandiol, 3,3 - Oxydi, Tetranitrate	90	0	0
1-Butene	130	0	0
Dimethoxy Methane	33	0	0
Methylene Chloride	0	6**	10**
Specific Conductivity	10250 umhos/cm	17250 umhos/cm	17250 umhos/cm

Groundwater Flow

	GW-2	GW-B
Oxybis methane	370	0
Dimethoxy Methane	37	0
Tetrahydrofuran	41	0
Chloroform	0	39
Methylene Chloride	0	6**
Specific Conductivity	8600 umhos/cm	5.4 umhos/cm

(Note: 1) * indicates compound present but below detection limit.
2) ** indicates value has been corrected for amount found in laboratory blank.)

From review of this analytical data it is the inspectors opinion that several organic compounds detected were due to field sampling and laboratory errors. The specific compounds were;

1. Acetone - this compound is present due to the use of acetone during the field sampling/decontamination procedures. Acetone was used as a final "rinse" to help clean the stainless steel sample containers prior to sample collection.

2. Chloroform and Methylene chloride - these compounds were not only detected in the field samples collected but were also present in the laboratory blank. Because these compounds were detected in the laboratory blank and are commonly found in the laboratory it is assumed that these constituents were present due to laboratory error.

The pesticides that were dete d at this location were Dieldri, Heptachlor and Gamma BHC. These pestici have been banned from use fo veral years. Based upon their presence near the old fill area and not down dient in the new fill it is the inspectors opinion that these materials were used during the old landfilling operation for vector/pest control. Specifically BHC Gamma was used for cattle dips, fly and maggot control and for household use on lawns, gardens and rose beds.

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2. Methane, Dimethoxy (Formal, Methylal) is reportedly used in perfumes and artifical resins. This compound is made from methonal and formaldehyde and is highly soluble in water. It is possible that the constituent tentatively identified may not be the one present.

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4. Oxybis Methane is a volitle material which is probably due to the operation of this landfill. This material was used in spray cans as a propellent, a refridgerent, solvent, catalyst and a stablizer for potymerization of plastics. Therefore, even though this constituent was only tentatively identified it is the inspectors opinion that the presence of this compound is probable for this location.

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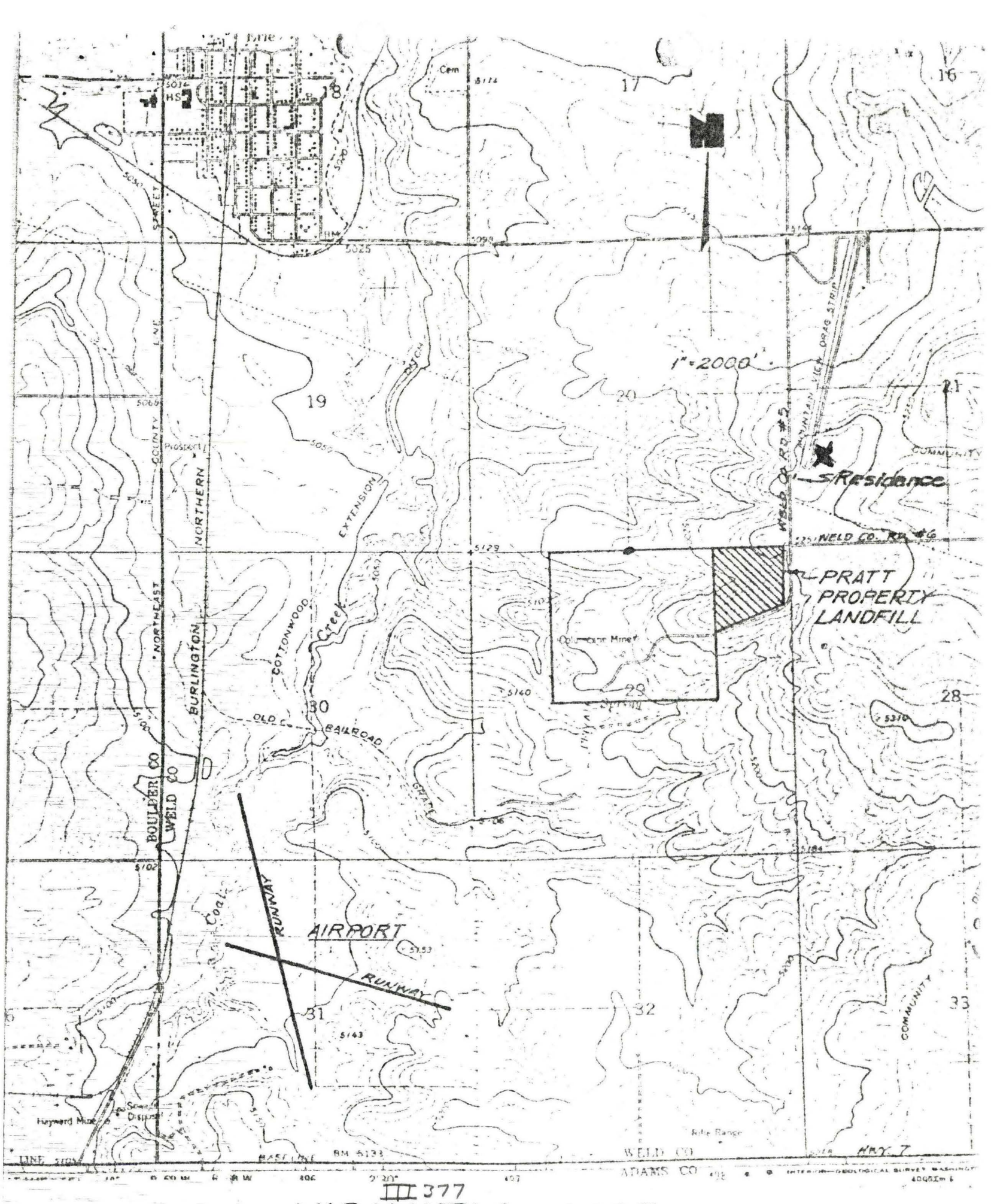
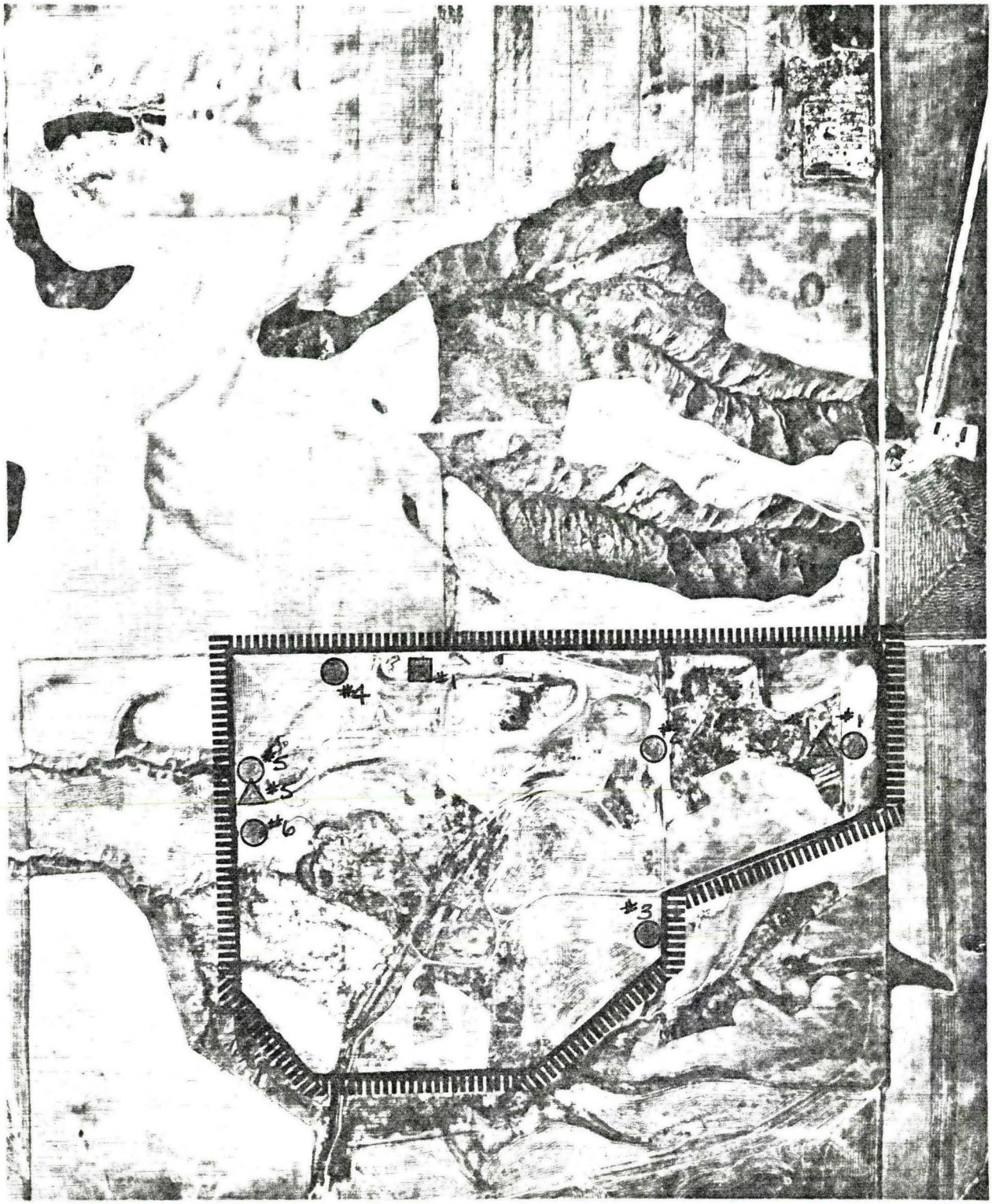


III 377

VICINITY MAP

FIG. 2-1



N

COLUMBINE LANDFILL

○ MONITORING WELL
△ SUFACE SITE
□ DOMESTIC WELL

SCALE: 1"=1000

JAMES H. STEWART & ASSOC., INC.

NOTE: MONITORING WELLS # 3, 4 & 6 WERE DRY ON MAY 23, 1983

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION
01 STATE: CO | 02 SITE NUMBER: D980635379

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Columbine Landfill	1750 Weld County Rd 6				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
Erie	CO	80516	Weld	123	04

09 COORDINATES: LATITUDE 40 02 04.0 | LONGITUDE 105 01 30.0

10 TYPE OF OWNERSHIP (Check one): [X] A. PRIVATE [ ] B. FEDERAL _____ [ ] C. STATE [ ] D. COUNTY [ ] E. MUNICIPAL [ ] F. OTHER _____ [ ] G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
06 13 84 (MONTH DAY YEAR)	[X] ACTIVE [ ] INACTIVE	about 1965 | Present (BEGINNING YEAR | ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
[ ] A. EPA [ ] B. EPA CONTRACTOR _____ (Name of firm) [ ] C. MUNICIPAL [ ] D. MUNICIPAL CONTRACTOR _____ (Name of firm)
[X] E. STATE [ ] F. STATE CONTRACTOR _____ (Name of firm) [ ] G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Scott Winters	Geologist	Colo Dept of Health	(303) 320-8333
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Dennis Hatover	"	Colo Dept of Health	(") " "
Mark Mullis	Consultant	E+E	(303) 757-4989
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Steve Orzynski	Tech Services Director	1333 West 120th Suite 210 (Northglenn, CO)	(303) 450-2755
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
[X] PERMISSION [ ] WARRANT	06/12/84 1315 06/13/84 0830 06/14/84 0900	Basically clean w/some Rain w/ temps ranging from 70°F to 90°

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Steve Orzynski	Kiewit Corporation	(303) 450-2755

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Scott Winters	CDH	WMD	303-320-8333	10 24 84 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CO	D980635379

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER (Specify) _____
- ☐ E. SLURRY
- ☒ F. LIQUID (?)
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS _____

CUBIC YARDS _____

NO. OF DRUMS ± 1500 — 84,000 gallons

03 WASTE CHARACTERISTICS (Check all that apply)

- ☒ A. TOXIC
- ☒ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☒ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS *	unknown	Unknown	Total vol is about
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS *	"	Unknown	84,000 gallons
IOC	INORGANIC CHEMICALS *	"	"	
ACD	ACIDS *	"	"	
BAS	BASES *	"	"	
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
SOL	MEK, MIBK, Cyclohexane ?		Drums	unknown	
OCC	Unknown	Unknown	unknown	"	
IOC	"	"	"	"	
ACD	"	"	"	"	
BAS	"	"	"	"	

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA & State files

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CO | 02 SITE NUMBER: D980635379

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: unknown
04 NARRATIVE DESCRIPTION
From groundwater samples, before EPA QA/QC review, may indicate contaminents in the system.

01 ☒ B. SURFACE WATER CONTAMINATION
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 2300
04 NARRATIVE DESCRIPTION
Because the shallow alluvial groundwater eventually daylights probably flows toward Coal Creek, about ½ mile from site. These conditions provide the potential for surface water contam

01 ☐ C. CONTAMINATION OF AIR
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
None reported or observed

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
" " " "

01 ☐ E. DIRECT CONTACT
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
None reported

01 ☒ F. CONTAMINATION OF SOIL
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: total 1 acreuse 195 (Acres)
04 NARRATIVE DESCRIPTION
Possible if drums are leaking

01 ☒ G. DRINKING WATER CONTAMINATION
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
Some statements are given in groundwater and surface water.

01 ☐ H. WORKER EXPOSURE/INJURY
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
None reported

01 ☐ I. POPULATION EXPOSURE/INJURY
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
" "

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CO	D980635379

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Not observed

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)
" "

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
" "

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES (Spills, Runoff, Standing liquids, Leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
" "

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
None reported

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
" "

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
" "

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
None reported or observed

III. TOTAL POPULATION POTENTIALLY AFFECTED: Total could be about ≈300

IV. COMMENTS
None

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)
EPA & State files
Site inspection & conversation w/ facility contact

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CO	D980635379

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)	Anticipate of designation		none	
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☒ F. LANDFILL w/drums below ground	±1500	drums
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCENERATION N/A
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER _____ (Specify)

05 OTHER

☒ A. BUILDINGS ON SITE

3 - 4

06 AREA OF SITE

195 (Acres)

07 COMMENTS

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE Potentially ☒ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

the drums were disposed of on a 10 ~~ac~~ to 25 acre site in the late 60's and early 70's

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☒ NO

02 COMMENTS

Drums have been buried for at least 10 yrs. Several 10's of feet of solid waste

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

EPA & State Files
Site Contacts

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CO	D980635379

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)	SURFACE	WELL	02 STATUS ENDANGERED	AFFECTED	MONITORED	03 DISTANCE TO SITE
COMMUNITY	A. ☐	B. ☐	A. ☐	B. ☐	C. ☐	A. _____ (mi)
NON-COMMUNITY	C. ☐	D. ☐	D. ☐	E. ☐	F. ☐	B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☐ A. ONLY SOURCE FOR DRINKING ☒ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER within 1 to 2 miles 100 to 200

03 DISTANCE TO NEAREST DRINKING WATER WELL ≈ 1½ (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
about 40-50 (ft)	probably west	40 to 50 or 400 (ft)	unknown (gpd)	☐ YES ☒ NO

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings)

The majority of the wells within this area are used for principally irrigation ~~and~~ and some domestic uses.

10 RECHARGE AREA		11 DISCHARGE AREA	
☐ YES ☐ NO	COMMENTS Unknown	☐ YES ☐ NO	COMMENTS Unknown

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☒ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Coal Creek	☐	½ (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 30 to 50 NO. OF PERSONS	B. 100 to 200 NO. OF PERSONS	C. 2300 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION ½ (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE	04 DISTANCE TO NEAREST OFF-SITE BUILDING
50 to 60	½ (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

In the immediate vicinity is a rural ~~from~~ farm & ranch area with the town of Erie about 2 to 3 miles to the Northwest.

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: CO | 02 SITE NUMBER: 0980635379

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
Exact depth unknown approx 10-15 feet (ft)	Unknown (ft)	Unknown	
06 NET PRECIPITATION	**07 ONE YEAR 24 HOUR RAINFALL**	**08 SLOPE**	
		SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
8 to 12 (in)	Unknown (in)	2-5 %	West	about 5 %

09 FLOOD POTENTIAL: ~~SITE IS IN~~ not in 100 YEAR FLOODPLAIN

10 N/A ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE	OTHER
A. N/A (mi)	B. ½ (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species): Unknown (mi)

ENDANGERED SPECIES: unknown

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AG LAND
A. ½-¾ (mi)	B. about 2-3 (mi)	C. adjacent to property (mi)	D. (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The facility is located ~~about~~ above an old ~~coal~~ coal mine with several faults existing in this area. The overall topography is an upland area characterized by ~~gentle~~ gently slopes with a maximum slope of about 10%. Relief in this area is approx 80 feet from the top of the landfill down to Coal Creek. 3 surface water containment ponds are situated on site with 2 additional stock ponds downslope / down drainage / of the site about ½ mile.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

State Files
On site inspection
Conversation with facility Contact

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CO	D980635379

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	~~4~~ 5	All inorganic samples were submitted to Cambridge Analytical Assoc. located at 222 Arsenal St. in Watertown, Mass. Organic samples were sent to Spectrix Corp. located at 3911 Fondren, Suite 100 in Houston Texas	Organics Analyses received Sept 17, 1984 Inorganics not received at time of report.
SURFACE WATER	2		
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
pH	~~Cond~~ values ranged from 6.7 to 8.9
Conductivity	" " " 2400 to 17200

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL

02 IN CUSTODY OF Colo Dept of Health (Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS Colorado Dept of Health

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

No ~~add~~ other data collected

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Onsite inspection
EPA + State Files
Laboratory Data

EPA FORM 2070-13 (7-81)

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CO	D980635379

II. CURRENT OWNER(S) old property & then New

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Kenneth Pratt		1921 Panorama Circle		Longmont	CO	80501
Kerr-McGee Corporation		1333 West 120th Suite 240		Northglenn	CO	80234

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE	12 CITY	13 STATE	14 ZIP CODE
Same						
Same						

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (If applicable; list most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

State Files
Facility Contacts

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CO	D980635379

II. CURRENT OPERATOR *(Provide if different from owner)* Same as Part 7 #2

01 NAME		02 D+B NUMBER
03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*		04 SIC CODE
05 CITY	06 STATE	07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER	

OPERATOR'S PARENT COMPANY *(If applicable)*

10 NAME		11 D+B NUMBER
12 STREET ADDRESS *(P.O. Box, RFD #, etc.)*		13 SIC CODE
14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) *(List most recent first; provide only if different from owner)*

01 NAME		02 D+B NUMBER
03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*		04 SIC CODE
05 CITY	06 STATE	07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD	
01 NAME		02 D+B NUMBER
03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*		04 SIC CODE
05 CITY	06 STATE	07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD	
01 NAME		02 D+B NUMBER
03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*		04 SIC CODE
05 CITY	06 STATE	07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD	

PREVIOUS OPERATORS' PARENT COMPANIES *(If applicable)*

10 NAME		11 D+B NUMBER
12 STREET ADDRESS *(P.O. Box, RFD #, etc.)*		13 SIC CODE
14 CITY	15 STATE	16 ZIP CODE
10 NAME		11 D+B NUMBER
12 STREET ADDRESS *(P.O. Box, RFD #, etc.)*		13 SIC CODE
14 CITY	15 STATE	16 ZIP CODE
10 NAME		11 D+B NUMBER
12 STREET ADDRESS *(P.O. Box, RFD #, etc.)*		13 SIC CODE
14 CITY	15 STATE	16 ZIP CODE

IV. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CO	D980635379

II. ON-SITE GENERATOR Not applicable.

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CO	D980635379

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not reported

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CO	D980635379

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Not reported

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
" "

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CO	D980635379

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

III. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

EPA FORM 2070-13 (7-81)

✓ PA/WLD/COLW INE SL WID-County

~~LAIDLAW SOUTH~~

Industrial Compliance Incorporated

August 25, 1986

DEC 24 1990

Mr. Danny Souders
Western Disposal, Inc.
P.O. Box 9100
Boulder, Colorado 80301

Project Number 1-1562

Dear Mr. Souders:

This letter presents the results of a drilling and well-installation program recently completed by Industrial Compliance Incorporated (ICI) at the Western Landfill near Erie, Weld County, Colorado. The program had three primary purposes. First, a monitoring well was installed to augment the existing monitoring system to ensure that it would detect contamination from the current landfill area in a timely fashion. Second, test holes were advanced east of the landfill to try and locate a suitable background monitoring well location. Finally, test holes were drilled along the alignment of the buried drainage to evaluate refuse thickness and the presence or absence of saturation.

Monitoring Well Installation

Ground-water monitoring well GW-11 was drilled to a depth of 58 feet at the location shown in Attachment 1. Bedrock was noted at 5 feet. The materials were all extremely hard and no evidence of saturation was found at any depth. Attachment 2 contains a copy of the lithologic and completion log.

Characterization Activities East of the Landfill

Test holes TH-11, TH-12, and TH-13 were drilled east of the present landfill to verify the presence or absence of refuse and/or ground water (Attachment 1). The holes were drilled through fill along the old drainage alignment to try and locate a zone that was both saturated and uncontaminated so that a background monitoring well could be installed. TH-11 was drilled to 18 feet with no refuse or water encountered. TH-12 was drilled to 23 feet with no refuse or water encountered. TH-13 was drilled to 17 feet with no refuse encountered. A layer of potentially

15955 West 5th Avenue Golden, Colorado 80401 (303) 279-2636

contaminated black soil was located and sampled at 16.5 feet. The soil had no odor and did not appear to originate from historic landfilling activities. Water was measured at 14 feet 24 hours after the drilling was completed; however, no well was installed because the black materials might adversely affect the natural ground-water composition.

Two additional test holes, TH-16 and TH-17, were drilled along the southern landfill boundary in an attempt to locate a suitable background ground-water source (Attachment 1). TH-16 was drilled to a depth of 28 feet with bedrock encountered at 7 feet. TH-17 was drilled to 19 feet and bedrock was encountered at 2 feet. Both holes were dry, so no background monitoring well was installed. See Attachment 3 for the geologic logs.

Drilling Activities in the Existing Landfill

Test holes TH-14, TH-15, and TH-18 were drilled to test for soil-cover and refuse thickness and to evaluate the extent of refuse saturation (Attachment-1). TH-14 was drilled to a depth of 58 feet. The cover was 3.5-feet thick and the refuse was saturated below 40 feet. TH-15 was drilled to a depth of 54 feet, with refuse encountered at 6 inches and saturation measured at 40 feet. No bedrock was encountered in either hole. TH-18 was drilled to a depth of 64 feet, with refuse encountered at 1 foot and bedrock at 63 feet. The refuse in TH-18 was unsaturated.

Closing

In summary, GW-11 was installed to monitor a bedrock interval that was not currently monitored by wells GW-8 and GW-9. No background monitoring well was installed because TH-11, TH-12, TH-16, and TH-17 were all dry and TH-13, which did have a saturated zone, contained an unknown material that could potentially affect the natural-water composition. Test holes TH-14, TH-15, and TH-18 had refuse to depths in excess of 60 feet. Holes TH-14 and TH-15 contained refuse that was saturated below a depth of approximately 40 feet. Hole TH-18 contained no saturated refuse.

Thank you for allowing ICI to complete this work for Western Disposal. Please contact the undersigned if you have any questions or comments on this program.

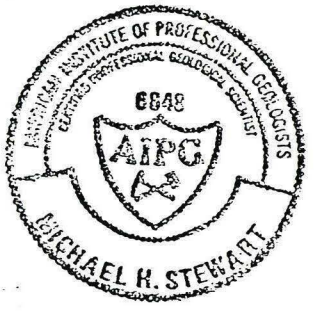
Sincerely,
INDUSTRIAL COMPLIANCE, INC

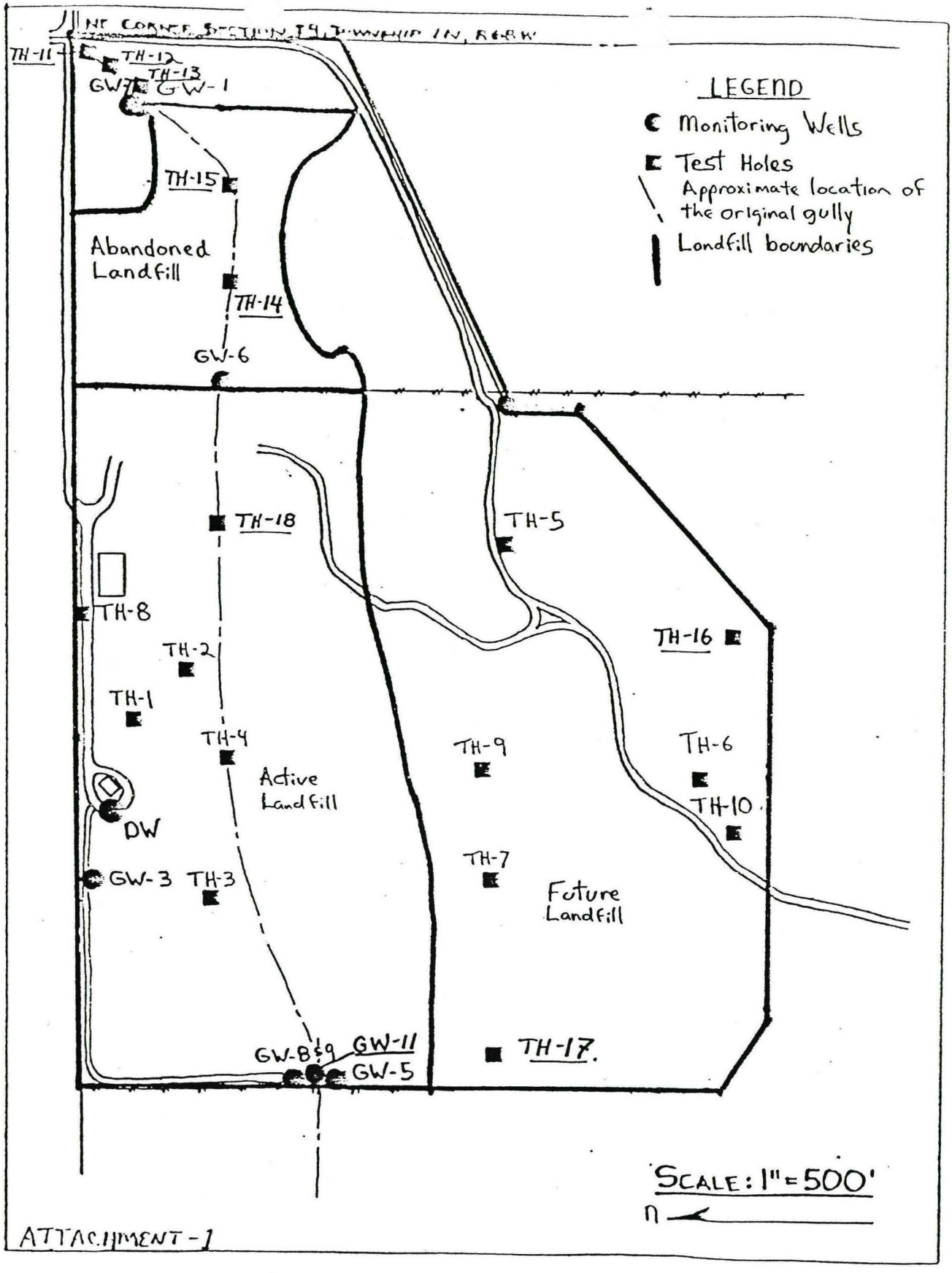
Scot A. Donato
Geologist

Reviewed By:

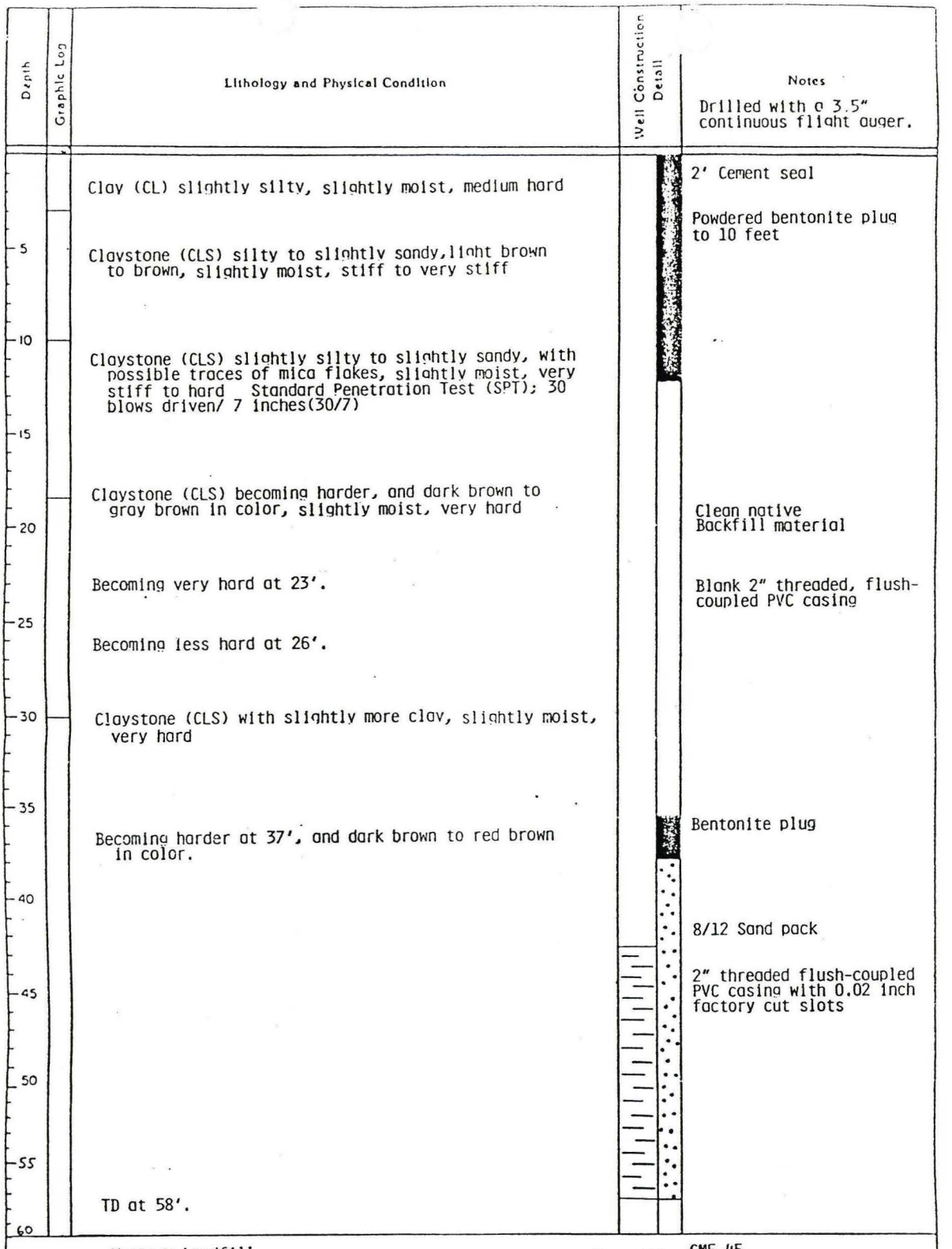
Michael H. Stewart, P.E.
Senior Hydrogeologist

SAD/MHS/bh
attachments





ATTACHMENT - 1



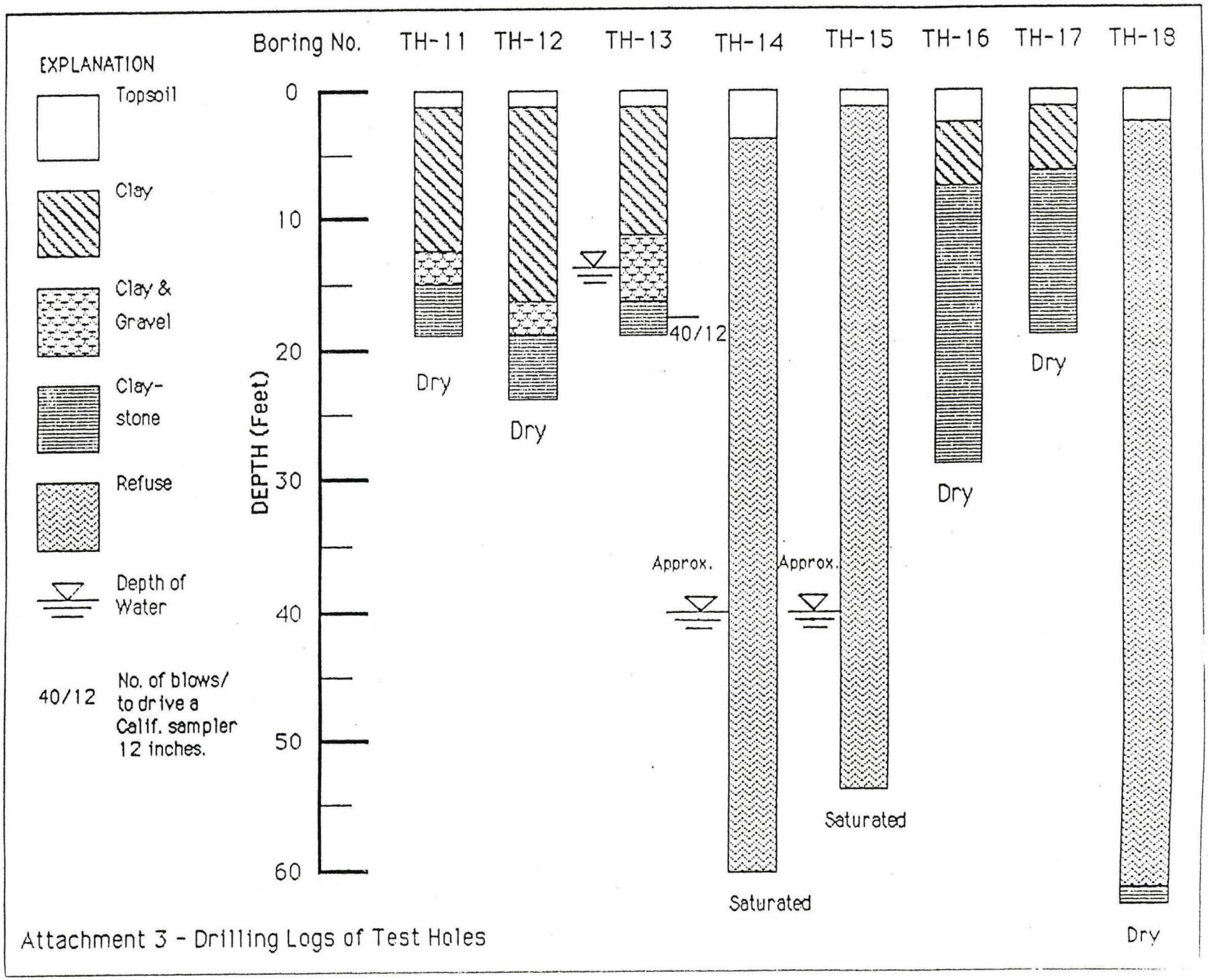
Project Western Landfill
Elevation
Date Drilled 8-13-86
Type of Rig CME-45
Total Depth 58 feet
Logged By S.A. Donato

SUBSURFACE EXPLORATION LOG

Industrial Compliance Incorporated
15955 West 5th Avenue
Golden, Colorado 80401

Job No: 1586
Date: 8-17-86
Figure

ATTACHMENT - 2



Attachment 3 - Drilling Logs of Test Holes

LAIDLAW

S 201-209
S 101-109 shallow well

drilled 14 9 Deep 4 Dry 4 H_2O
5 shallow all dry
existing well PZ
GWS
Dry P3 1' soil
P4

geophysics on all bedrock wells
Neutron-Density

4 wells 3 coal mine TD ~ 300'
1 laramie/fox hills TD 700'

HX cores > measured ROD
> sum of length in 4"/overall recovery
> recovery rate of core
> fracture frequency
> inclination of fractures

avg 85% recovery

GOALS adequate monitor
is shallow conn. related w/ ...

DAVID RAU Terracon.

1. stainless,
   varieties pH dependent
   corrosivity

2. Alluvial 10'-15' screen. 1-10' 1-5'
2. Double cased. well 2-5' into bedrock
   6¼" PVC for

2 DAY Drill w/ double casing.

6¼ inch hollow stem
set 4" PVC casing - check w/ EPA.

* solid stem w/ split spoon.

continuous hollow stem

annex core (dry core). using air as fluid w/ start w/ air, but must plan to use H₂O if lithology dictates.

possible screen length 10' - 40'

d. total screen need 55'
have xtra 10' & 5' scrn section on site.

DAY 3

develop bedrock

check alluvial incase well was not appropriately developed

WL

Develop
bail minimum 5 well volumes
pH, temp & SC w/in 10%. w/ 3 successive

disposable bailers
Voss Technologies.
1-800-247-6294

Austin
Utility locate.
Property access
Stake locations.
CLP
11.8 Volt PID
Call North Carolina EPA.

we have an OVA
IP Methylene Chloride (?)
MEK (?)
we don't have ~~one~~ 11.8 lamp, or rent Hnu?

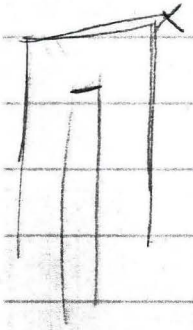
PAT/Glenn
CLP LAB clearance ① sample ERIE in advance of drilling
② sample H_2O at time of drilling

disposable bailers

Scrn slot .010" slot
w/ 10-20 graded silica

- need to contact town of Erie to use their water supply
  1. sample proposed supply first
  2. sample supply that we use
  3. Tetracon has a water tank on truck to carry from Erie to drill site.
- 250 gallons capacity tank on rig

DAY 1
drilling outside casing for shallow bedrock well hollow stem split spoon split alluvial well drilling hollow stem spoon construction alluvial well
WL after drill, prior to development.



DAY 2
core & drill bedrock well w/ 1X core
complete construction
develop alluvial well w/ stainless bailer
> supply of locks - grind off code.

check WL after drill & prior to development

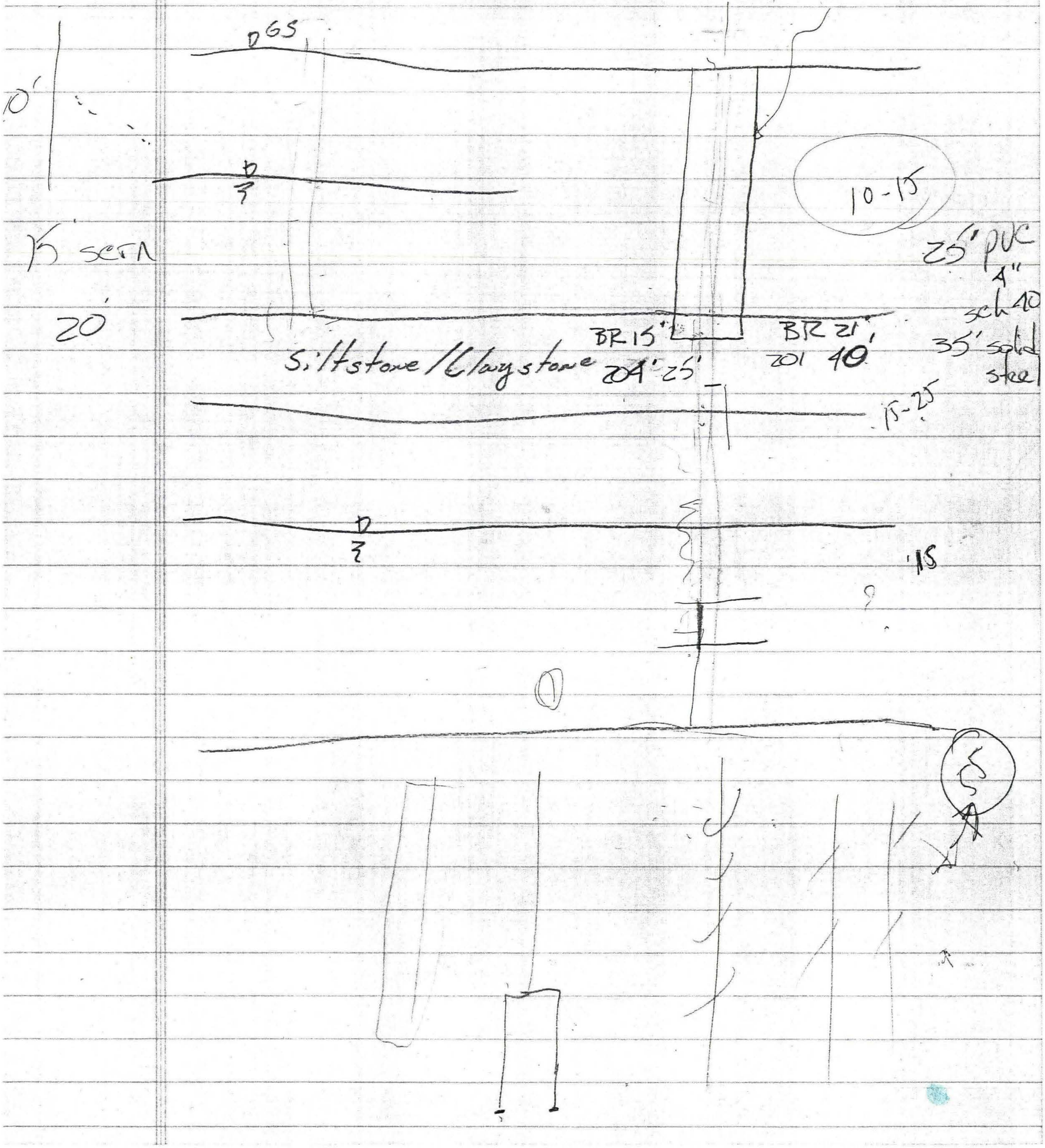
~~clean~~
stem well pipe on site.

discharge cuttings & H_2O on site
if high PID - containerize.
cutting & H_2O.
CDH will be generator.

Surveying well location. cost (?) terracon

Report from Terracon
1. survey
2. well development
3. well construction detail
4. well drilling log.

use dictaphone
Driller, Drillers help & project


DGS
10'
20'
Siltstone/Claystone
BR 15'
204' 25'
BR 21'
201 40'
10-15
25' PVC
4"
sch 40
35' solid
steel
15-25
15
5